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OF
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GINGER ESSENCE
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HIGHLY
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FRUIT
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CONCENTRATED
COLOURINGS
FOR ALL LIQUIDS.

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MINERAL WATER
MAKERS,
CORDIAL MAKERS,
RECTIFIERS & DISTILLERS,
BREWERS, &c.

"PUMILINE."

EXCLUSIVELY OBTAINED FROM



THE SNOW-GROWN PINUS PUMILINE

PUMILINE ESSENCE

Is a specially prepared volatile essence, distilled from a particular variety of pine, growing nearest the snow level on the Alps. It possesses exceptional medicinal properties when given internally, or in the form of inhalations, in the treatment of Pulmonary and Diathetic Affections, such as Phthisis, Rheumatism, Gout, &c. It is a valuable deodorizer and disinfectant, and has a peculiarly refreshing and fragrant odour.

PUMILINE JUJUBES

For Sore Throat, Cough, Hoarseness, &c., they give immediate relief.

PUMILINE LINIMENT

Specially beneficial for use in Chronic Rheumatism, Gout, Lumbago, Sciatica, &c. It is also invaluable for Throat and Chest Affections, and may be taken internally, in doses of 2 to 5 drops.

PUMILINE PLASTER

Is most effective in Chronic and Muscular Rheumatism, Lumbago, Sciatica, and also for Chest Affections.

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For Gout, Rheumatism, and Skin Disease; used in BATHS, Ointments, and Liniments.

PUMILINE OINTMENT

For all Skin Affections, Irritations, Insect Bites, Burns, &c. This Ointment is a fine smooth homogeneous application. It gives immediate relief in the intolerable itching of Eczema, &c. It is unrivalled both as a medicinal agent and toilet requisite.

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Is a carefully neutralised superfatted Soap, containing no free alkali, and is a Lubricant instead of a Desiccant to the skin. It is peculiarly adapted for use to the delicate skin of ladies and children. It leaves the skin smooth and satiny, and beautifies the complexion. The Pumiline Essence which it contains makes it a powerful disinfectant.

PUMILINE DRY INHALER

Most effective and convenient pocket inhaler for use in Throat or Lung Troubles. Is invaluable for use during a fog or mist.

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PRICES—

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PUMILINE ESSENCE	1/6 and 2/6 per bottle.....	15/ and 24/ per dozen.
PUMILINE EXTRACT	1/ per bottle.....	9/ per dozen.
PUMILINE JUJUBES	1 1/2 and 2/3 per box	10/6 and 20/ per dozen.
PUMILINE OINTMENT	1 1/2 and 2/9 per pot.....	11/ and 27/ per dozen.
PUMILINE LINIMENT	1 1/2 and 2/9 per bottle	11/ and 27/ per dozen.
PUMILINE SOAP...(box of 3 cakes).....	1/6 and 9d., and 1/ per tablet.....	15/, 7/6, and 9/ per dozen.
PUMILINE PLASTER	1 1/2 each	9/ per dozen.
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BESIDES WHICH AN ADDITIONAL DISCOUNT IS ALLOWED TO CHEMISTS AND THE TRADE.

G. & G. STERN, 62 Gray's Inn Road, LONDON, W.C.

Will send Show Cards and Literature Free on Application.

The Chemist and Druggist

SUPPLEMENT

Businesses Wanted.
Businesses for Disposal.
Premises to Let.
Auction Sales.

SATURDAY, FEB. 8, 1890.

Partnerships.
Situations Vacant.
Situations Wanted.
Miscellaneous.

This Supplement will be given free to any Chemist and Druggist or Assistant who will call for it at 42 Cannon Street on Friday afternoon, or will be posted on Fridays to any one who sends an addressed postal wrapper.

OFFICES: 42 CANNON ST., LONDON, E.C.

ADVERTISEMENTS for this Supplement can be received on FRIDAY MORNING, first post, though it is requested that these may be sent in as early in the week as possible.

EXCHANGE COLUMN ADVERTISEMENTS will appear on page 10 (bottom folio), and must be received not later than THURSDAY AT NOON, to appear in the next issue.

All Advertisements for this Supplement and Exchange Column must be prepaid. Remittances payable to EDWARD HALSE and crossed MARTIN & Co.

CHEMISTS' TRANSFERS.

MESSRS. ORRIDGE & CO., 32 LUDGATE HILL, E.C.

CHEMISTS' TRANSFER AGENTS,

May be consulted at their Offices on matters of SALE, PURCHASE, and VALUATION.

The business conducted by Messrs. Orridge & Co. has been known as a Transfer Agency since the year 1848, and is well known to all the leading firms in the trade. VENDORS have the advantage of obtaining an opinion on value derived from extensive experience, and are in most cases enabled to avoid an infinity of trouble by making a selection from a list of applicants for purchase, with the view of submitting confidential particulars to those alone who are most likely to possess business qualifications and adequate means for investment. PURCHASERS who desire early information regarding eligible opportunities for entering business will greatly facilitate their object by describing clearly the class of connection they wish to obtain.

1.—£650.—LONDON, N.—Good Family Business; Retail and Dispensing; returns £650 yearly; well-fitted shop and good stock; vendor is retiring from business; good introduction will be given; full particulars on application.

2.—£300.—LONDON, W.C.—Lock-up Pharmacy for immediate disposal, well suited for a Branch; business of first class, and good prices obtained; returns £300, increasing yearly; handsome shop; about £800 required, or offer considered.

3.—£800.—SOUTH SIDE OF THAMES.—Good ready-money locality; Retail and Dispensing Business; returns £800 yearly, admitting of considerable increase; well fitted and attractive shop and first-rate stock; good 8-roomed house with private entrance; about £750 required.

4.—£450.—HERTS (Death vacancy).—Pretty locality; good-class Retail and Dispensing Business; returns £450 last year; have decreased through illness of the late owner; good roomy shop and excellent house; about £400 required, to include expensive house fixtures.

5.—£450.—SURREY.—Unopposed country Business of good class; returns £450 yearly, can be much increased; newly-fitted shop and good stock; convenient house and good garden; about £350 required.

6.—£738.—NORFOLK.—Good town; first-class Retail and Dispensing Business with Post Office attached; returns average £738, with nearly 50 per cent. net profit; handsomely fitted shop and good stock; full particulars on application.

7.—£500.—LONDON, N.E.—Select Family Retail and Dispensing Business; returns nearly £500 yearly, with good profits; large and convenient house and attractive garden; price about £450.

8.—£1,300.—WALES (SOUTH).—Death vacancy; very old-established; held by the late owner many years; returns £1,300 yearly; can be much improved; well-fitted shop and good stock; about £800 required.

9.—£800.—SOUTH DEVON.—Good-class old established Business, Retail and Dispensing; held by the vendor 20 years; returns £800 yearly, with good profits; well-fitted shop and good stock; about £500 required.

10.—£350.—DEVON.—Suburb of fashionable town; small select Retail and Dispensing Business; returns nearly £350; good house and shop; price, to include the furniture, &c., £350, or offer considered.

11.—£850.—STAFFORDSHIRE.—Main and Branch for disposal; Branch recently established; gross receipts £850; both businesses well fitted and stocked, and returns increasing; about £700.

12.—£250.—KENT.—Near town; small increasing Retail and Prescribing Business; returns under management £35 per month; can be much increased; large and convenient house; about £250 required, or offer considered.

13.—£500.—SEASIDE (SOUTH).—Retail and Prescribing Business; established many years; present returns £500 yearly; good prices; well-fitted shop; good-sized house and garden; very moderate rental; price £450, or offer.

14.—£700.—SOUTH OF ENGLAND.—Good country Business, Retail, Dispensing, and Prescribing; established many years; returns about £700 yearly; full prices; modern shop; comfortable house and garden; price £640.

Particulars of any of the above will be furnished on application.

N.B.—NO CHARGE TO PURCHASERS.

Other Businesses, Town and Country; particulars free on application. Personal applicants receive Messrs. O. & Co.'s direct attention and advice, where required, free.

TERMS FOR VALUATION ON APPLICATION. APPOINTMENTS BY POST OR WIRE HAVE IMMEDIATE ATTENTION.

Messrs. Orridge & Co. invite communications from COLONIAL and FOREIGN firms where business of a confidential nature requires the especial attention of a London agent.

SPECIAL NOTICE.—TO PRINCIPALS AND ASSISTANTS.

MESSRS. ORRIDGE & Co. Register Vacancies for Situations FREE OF CHARGE.

ORRIDGE & CO., 32 Ludgate Hill, LONDON, E.C.

F. J. BRETT,

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60 St. Stephen's Road.

References to principal London and Provincial Wholesale Houses, also to numerous clients throughout the United Kingdom.

BUSINESSES THOROUGHLY INVESTIGATED FOR BUYERS. 20 YEARS' EXPERIENCE.

LONDON, W.—Light Retail, Dispensing, and Prescribing; no booking; returns £1,000; price £475.

LIVERPOOL.—Select Retail and Dispensing; returns £600; rent £45; price £530.

BIRMINGHAM.—Light Retail, Dispensing, and Prescribing; returns over £600; rent low, on lease; goodwill £50; stock and fixtures at valuation, about £500.

SUSSEX.—Dispensing, Light Retail, and Prescribing, at good prices; pleasant seaside town; returns £500; price £450.

LANCASHIRE.—General, Retail, and Prescribing, with fair Dispensing; returns £1,600 (over); price £800.

SURREY.—Light suburban Retail; returns £300; price about £200; excellent opening for Dentistry.

MESSRS. BERDOE & CO.

CHEMISTS' TRANSFER AGENTS & VALUERS,

30 JEWRY STREET, ALDGATE, E.C.

Established 1870.

VENDORS will find our Offices a quick medium for the Sale of genuine Businesses. Strict confidence guaranteed. Several good-class Businesses wanted returning £700 to £1,500. Town or country.

PURCHASERS are invited to apply (stating their requirements) for particulars of businesses, sent free on application.

NO CHARGE TO PURCHASERS.

SUSSEX.—First-class Retail and Dispensing Business, returning £700, increasing, and at full prices for everything; rent £35; good house; best position; price to an immediate purchaser £550.

HERTS.—Market town; Light Retail, Dispensing, and Prescribing; same hands 20 years; returns £700; net profit £300; well-fitted and heavily stocked; owner taken larger business; price £630.

WEST OF ENGLAND.—Old-established Retail, Dispensing, and Prescribing Business in large market town; returns £2,500; net profit £550; price £1,400; stock and fixtures worth £1,200.

WORCESTERSHIRE.—Retail, Dispensing, and Prescribing trade, returning over £800, with good profits, increasing every year; rent £20; good house, large garden; price £650.

GLOUCESTERSHIRE.—Village Business doing good-class trade; returns £700; rent £28; vendor's own property, will grant lease; very comfortable house; price £400; strongly recommended.

SURREY.—Good-class Dispensing and Retail; returning £1,150, showing good profits; handsome shop, good premises; quite unopposed; very attractive locality; price £800 or reasonable offer.

WILTSHIRE.—Market town; good-class Retail and Dispensing Business, returning £1,250; large house with good garden; moderate rent; same hands many years; price £1,000 or offer.

OXFORDSHIRE.—Market town; Light Retail and Dispensing; returns £400 can be doubled; good house; low rent; price £275.

LONDON, S.E.—Ready-money Retail, making a net profit of £330 from a return of £600; low rent, valuable lease; same hands 14 years; price £400; unusual opportunity.

N.W. (few miles out).—Retail and Prescribing trade, returning £400; good house; same hands 6 years; price £200.

SALE BY TENDER.—RAMSGATE.—Messrs. Berdoe & Co. beg to announce that this Business was sold. Other Businesses, town and country. Particulars free on application.

Terms for Sale and Valuation on application.

Messrs. Berdoe & Co., 30 Jewry St., Aldgate, London, E.C.

BUSINESSES FOR DISPOSAL.

3s. 6d. for fifty words; 6d. for every 10 words beyond.

IMMEDIATE SALE.—Well-known Proprietary Business in Preserved Foods, steady trade, capable of great extension; £1,200 or offer; immediate sale compulsory. Principals or Solicitors address, "Lovell," 947, Messrs. Deacons, Leadenhall Street, E.C.

OLD-ESTABLISHED Business; shop double-fronted, well fitted and stocked; valuable proprietary medicines; oash trade; populous locality; ago cause of disposal; state amount of purchase money. Address to C. M. K., Miss Atkinson, 40A King William Street, London, E.C.

PLYMOUTH.—Most desirable position; old-established good-class Retail and Dispensing Business; returns over £600; large profits; handsomely fitted double-fronted shop; good stock; price £500. For full particulars write A. B., care of Messrs. Barron, Harvey & Co., Giltspur Street, London.

Mr. G. B. CROCKER,

Trade Valuer, Transfer Agent, & Accountant.

15 WALBROOK, E.C.

SOMERSET.—Old-established Retail and Dispensing; returns £900, very profitable; low rent; good house and garden; price £700; thoroughly sound and recommended.

MIDLANDS.—Country Retail and Dispensing, with Stationery; returns over £500; net profit £180; valuation of stock and fixtures only.

SURREY.—Country Retail and Dispensing; returns £700; price £500; good house and garden; capital position in centre of market town.

HOME COUNTY (20 miles from town).—A Light Retail Business; returns £400; rent £30; price about £260.

LONDON, S.W.—Good-class Family Dispensing trade in favourite locality; returns £650, and increasing; price about £550; handsome shop; large house and garden, moderate rent.

LONDON (SOUTH).—A good-class Prescribing and ready-money trade of a very profitable nature; returns £850; price about £800; increasing neighbourhood; large and convenient residence.

LONDON, S.E.—A good-class Retail and Dispensing Business; returns £750; price £550; net profit £300; good residence, low rent, long lease.

Valuations for Probate or Transfer conducted in any part of the United Kingdom. Terms on application.

BUSINESSES FOR DISPOSAL—Continued.

WEST KENSINGTON.—Genuine ready-money Retail; unopposed; 11 years' lease. Particulars from "Malta," care of Messrs. Sawyer & Sons, Oxford Street, W.

A N old-established high-class Business in Surrey; no cutting; equal to any West-End trade; a splendid opening for a Major man well up in practical Chemistry; returns £800; price £800. "Pharmacist," 50 Southwark Street, London, S.E.

F OR disposal, an old-established Dispensing Business in a fashionable town in the West of England; doing a profitable trade; price £550. For further particulars apply, "Fides," Office of THE CHEMIST AND DRUGGIST, 42 Cannon Street, E.C.

S MALL Retail and Dispensing Business in good neighbourhood for sale; shop well fitted and stocked; good house; good opening for dentistry; no reasonable offer refused. "D," care of Wright, Layman & Unwin, Southwark Street, London.

£200 will purchase a good Mixed Business; opposition almost nil; well fitted and stocked; satisfactory reasons for leaving; immediate possession if required. Full particulars on application to J. H. Green, 8 Princess Street, Bishop Auckland.

£250 WILL purchase a substantial Business in a country town; the turnover amounts to from £350 to £400 per annum, and may be easily increased. Full inquiries and personal investigation invited by A. B. C., care of Office of THE CHEMIST AND DRUGGIST, 42 Cannon Street, E.C.

I N one of the most thriving towns in Lancashire; good stand, capable of doing a large Prescribing Business; stock and fixtures at great sacrifice; rent only £17 for house and shop; proprietor giving up the drug business for dentistry. Address, "Dante," Office of THE CHEMIST AND DRUGGIST, 42 Cannon Street, E.C.

£450.—Returns over £900; best position in market town; double-fronted corner; good house; entirely under management, and capable of great extension; old-established and well fitted and stocked; vendor ordered abroad. "Opium," Office of THE CHEMIST AND DRUGGIST, 42 Cannon Street, E.C.

A GENUINE old established Country Business, in large village, situated in High Street; over 3,000 inhabitants; comfortable house, private entrance, large garden; unopposed for miles; low rent, on lease; returns increasing; satisfactory cause for selling; price £250. "Dental," Office of THE CHEMIST AND DRUGGIST, 42 Cannon Street, E.C.

T WO CHEMISTS AND DRUGGISTS.—To be disposed of by private treaty, an old-established Retail and Dispensing Drug Business, in Cheshire; returns on an average of past five years £831; rent £35; commanding front; immediate possession; price for stock, fixtures, and goodwill £500. Apply, J. Woolley, Sons & Co., 57 Market Street, Manchester.

A GENUINE Chemist's Business, established 1628, in the best situation in a town about 8 miles from Manchester; returns above £1,100 a year and increasing; price, net sum, £430; a bargain; most satisfactory reasons for disposal. Also an old-established Business, doing the most select trade, in a town not far from Hull. Apply, Thomas Tomlinson & Son, 9 New Cannon Street, Manchester.

PARTNERSHIP.

3s. 6d. for fifty words; 6d. for every 10 words beyond.

W ANTED, a sleeping Partner with £100 or £200 to push good and well-known specialties. 271/50, Office of THE CHEMIST AND DRUGGIST, 42 Cannon Street, E.C.

BUSINESSES WANTED.

WANTED, a genuine Chemist's Business; returns from about £700 upwards; no agents. Address, "Chemist," 229 High Road, Kilburn, W.

WANTED, genuine Business, returning not less than £500; country or seaside; cash ready; no agents. Particulars to L. G., Office of THE CHEMIST AND DRUGGIST, 42 Cannon Street, E.C.

FOR SALE.

3s. 6d. for fifty words; 6d. for every 10 words beyond.

DEVONSHIRE.—Stock, fixtures, &c., of an old-established Business in a good market town to be sold immediately through death of principal; good opportunity for beginner. For further particulars apply, S. Roberts, 17 Pont Street, Chelsea, S.W.

HANDSOMELY-FITTED and well-stocked Pharmacy; thickly populated and rapidly increasing neighbourhood; large house; rent £55, £48 let off; recently opened; returning under junior nearly £7 weekly; principal under two years could do £1,000; satisfactory reasons given for sale; reasonable offer accepted. "Auranti," Office of THE CHEMIST AND DRUGGIST, 42 Cannon Street, E.C.

DRAWERS, COUNTERS, SHOW CASES AND CARBOYS.

FOR SALE.—One 13 ft. range second-hand mahogany Drawers, lockers under and shelving over, £8; one 12 ft. range new mahogany drawers, with plate-glass labels and knobs, £9; one 12 ft. ditto, pine drawers, gold labels and glass knobs, £6 12s.; one 9 ft. mahogany top counter fitted with drawers, £5; one new bent Tooth Brush Case, 25s.; one 2 ft. second-hand mahogany Desk and glass case in front, 47s. 6d.; 3 3-gallon, 7s. 6d.; 4 1-gallon, 10s., and 3 6-gallon carboys, 12s. 6d. each. R. Tomlinson & Sons, Medical Fitters, Bond Street, Constitution Hill, Birmingham.

TO LET.

3s. 6d. for fifty words; 6d. for every 10 words beyond.

PRETTY VILLA, in select district, with Pharmacy attached; snit gentleman with means; exceptional advantages; nearest Chemist 3 miles. Address, "Medicus," Messrs. Ayrton & Saunders, Duke Street, Liverpool.

SHOP and House, in good position; rapidly-increasing town of 16,000 inhabitants, 12 miles from London; just fitted and stocked, but not opened; rent £45, free until March; valuation only required, about £200; splendid chance to anyone desirous of starting a new business. Apply, Messrs. Bercoe & Co., 30 Jewry Street, Aldgate, E.C.

TO CHEMISTS AND DRUGGISTS.—To Let, the House and Shop at the junction of Caledonian Road and Little Woodhouse Street, Leeds, lately occupied by Henry Sagar, deceased; the shop has a commanding position; fixtures are in excellent condition; immediate possession can be had; to a pushing young man this is a chance seldom to be met with. Apply to T. H. Seagar, Wholesale Ironmonger, Guildford Street, Leeds.

APPRENTICESHIPS.

3s. 6d. for fifty words; 6d. for every 10 words beyond.

TO Parents and Guardians.—Wanted, a well-educated youth as Apprentice; small premium required. Treweeks, Chemist and Stationer, Pembroke.

WANTED, to place a youth now preparing for the Preliminary with a chemist in a good provincial town, doing a family trade; indoors. State terms to L., 14 Bunhill Row, London, E.C.

WANTED, Apprentice in a good-class Retail and Dispensing; comfortable home; dentistry may be acquired; gentlemanly youth only required. Mr. Doubleday, Dorking, Surrey.

APPRENTICE wanted in good-class Light Retail and Dispensing business; with every opportunity for advancement, and time for study; premium moderate. W. E. Britton, A.P.S., Bridge House, Barnstaple.

SITUATIONS OPEN.

3s. 6d. for fifty words; 6d. for every 10 words beyond.

WHOLESALE.—Wanted, a competent Packer. Apply, Messrs. Gale & Co., 15 Boulevard Street, Fleet Street.

JUNIOR or Improver; one used to a country trade preferred. Send full particulars to Smart, Pharmaceutical Chemist, Steyning.

WANTED, at once, Junior or Improver. Apply, with full particulars, to "Manager," 81 Athol Street, Liverpool.

MANAGER for Branch in populous locality; qualified; married; must have had suitable experience. B., 2 Malvern Road, Kilburn.

WANTED, a Junior Assistant (outdoor). Apply, giving full particulars, to D. P. Roberts, Drug and Chemical Store, North End, Croydon.

JUNIOR Assistant, indoors, for a good country Retail. Apply, stating age, references, and salary required, to Williams, Victoria Road, Aldershot.

AS Junior; one who has been accustomed to good-class trade. Apply with full particulars, and carte if possible, to S., 54 High Street, Stroud, Glos.

OUTDOORS.—Two qualified Assistants, quick and accurate dispensers. Apply to the Manager, Drug Department, 105 Victoria Street, Westminster, S.W.

JUNIOR, indoors, not under 21, for cash business, W.; salary £30. Apply, giving full particulars, to J., Messrs. Hodgkinson & Co., 198 Upper Whitecross Street, E.C.

IMPROVER or Turnover in a select Retail and Dispensing Business. Full particulars, enclosing photo, to Frederick James Lea, The Folkestone Pharmacy, Folkestone.

WANTED, a Junior Assistant, for retail and dispensing, also good counterman. Address, stating wages, age, reference, &c., T. F. Board, 189 High Street, Cheltenham.

WANTED, immediately, a Junior or Improver; good reference, with knowledge of Teeth Extraction. Apply to A. H. Adams, 21 Formosa Street, Maida Hill, London, W.

WANTED, immediately, Junior Assistant; must have good reference, and be willing and obliging; short hours and no Sunday duty. Particulars to H. S. Hogg, Chemist, Ulverston.

IMMEDIATELY, a qualified Assistant, for light retail and dispensing business; apprentice kept; indoors. Apply, stating salary, references, &c., to J. A., 145 Woodhouse Lane, Leeds.

WANTED, a good Junior in Mixed Business (not heavy), by middle of February. State full particulars, and enclose photo. (shall be returned), to J. E. Reade, 42 High Street, Crews.

AN Assistant wanted for a Light Retail and Dispensing business in the West-end; must have Minor qualification, and well up in Dispensing and Counter work; good salary to a snitable man. Apply to "Statim," care of J. N. Loesby, 4 Thayer Street, W.

IMMEDIATELY.—A competent Assistant, qualified preferred, to take charge of a small mixed country Business for a few months. Apply, enclosing carte (to be returned), stating experience and salary required, "Lem," care of Heaton & Co., 33 Southwark Street, S.E.

WHOLESALE.—Clerk required about 18 or 20 years of age, accustomed to bookkeeping. Apply, stating age, salary, and experience, to "Ledger," care of H. Good & Son, 12 Moorgate Street, E.C.

WANTED, Junior Assistant (indoors), who must have a good general knowledge of a Mixed business; only those with exceptional references need apply; time for study. Willis, New Brompton.

WANTED, outdoor Assistant, qualified, between 24 and 28, on February 20; must be a gentleman of good address and well up in his business; state salary expected and all particulars; photo if possible. Morgan, 50 Broadway, Wimbledon.

WANTED, a competent Assistant; qualified; about 24; accustomed to good Dispensing and Light Retail; comfortable home. State age, salary, height, and references, and enclose carte if possible, to be returned, to J. J. Burnett, Chemist, Bishopston, Bristol.

TRAVELLER.—Essences to Mineral Water Makers; a good commission offered by an established provincial house, who have a connection in the S. and S.E. of England; must know the trade. Address, W. W., Office of THE CHEMIST AND DRUGGIST, 42 Cannon Street, London, E.C.

TO DISPENSERS.—Wanted, at once, a Dispenser (outdoors); must be qualified, and under 35 years of age; no Sunday duty. Apply, by letter, stating experience and salary required, to F. G. H., 136 Queen Victoria Street, E.C.

J. BEECH, Pharmaceutical Chemist, Ladywood, Birmingham, requires an active Junior Assistant for Light Retail and Dispensing business; comfortable home. State salary required and full particulars, when at liberty; also enclose photo, which will be returned.

IMMEDIATELY, a Junior Assistant for a Light Retail and Dispensing business; one who has passed the Minor preferred, although it is a good place for one preparing to pass. State salary required, with all other particulars, to "Statim," Messrs. Hodgkinson's, 198 Upper White Cross Street, London, E.C.

WANTED immediately, a Junior, with 2 or 3 years' experience, about 18; one accustomed to a Mixed business not objected to. State age, height, experience, references, and salary required (outdoor), to "Omega," Office of THE CHEMIST AND DRUGGIST, 42 Cannon Street, E.C.

IMMEDIATELY.—A Junior Assistant; a quick and accurate Dispenser, good writer, for first class Family and Dispensing business. State age, experience, height, salary expected (indoor), and references, also enclose photo, which will be returned. Apply, T. C. Taylor, 20 Long Row, Nottingham.

DISPENSER.—Wanted, by the Manchester Hospital for Consumption and Diseases of the Throat, a legally qualified Chemist as Dispenser; state age and experience, also qualification and salary required. Applications, with testimonials, to be sent in not later than February 18 to C. W. Hunt, Secretary.

WANTED, a capable young man as Second Assistant in the Retail; must be used to Mixed Family and Agricultural trade and be a good hand with customers; state salary required (outdoors), with references and full particulars in first letter. Kemp & Son, Wholesale and Retail Druggists, Newcastle.

YOUTH wanted, not under 20, by a patent medicine proprietor in large town; he must have experience and be able to wrap a 6-ounce bottle neatly and very quickly; a permanent engagement; state age, wages, reference, and experience. Address, W. W., Messrs. Mather & Growther, 71 Fleet Street, E.C.

WANTED, in five or six weeks, a qualified Assistant, outdoors, aged 30 to 35, experienced, to take management of a light retail business during absence of proprietor; must be active and obliging. Please send particulars (and photo, to be returned) to W. R. Yorks, Office of THE CHEMIST AND DRUGGIST, 42 Cannon Street, E.C.

SITUATIONS WANTED.

1s. for twelve words; 6d. for every six words beyond.

JUNIOR; London or Manchester; time for study essential. "Indigo," Howden, Yorks.

WANTED, the Management of a Mixed Country Shop. Gray, 31 Baker Street, Liverpool.

DISPENSER; Hospital or Surgeon; qualified; 26. "Chemicus," 17 Applegarth Road, W.

AS Assistant (25); stores preferred; 9 years' experience. "Leech," 38 Alexandra Road, Wimbledon.

OUTDOOR; 10 years' good experience; aged 25; height, 5 ft. 8 in. F. C., 20 Park Street, Nottingham.

ASISTANT (22½); London experience; part time preferred. Mascott House, Dawes Road, Fulham.

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The attention of manufacturers of Medicated Plasters has hitherto been directed chiefly toward perfecting the mechanical excellence of their preparations, overlooking, to a certain extent, the real end and aim for which Plasters are made.

The extent to which counter-irritants, solvents, detergents, &c., can be utilised in Plasters to produce a mechanical chemical alteration of the epidermis, thus rendering the skin more absorptive, has been largely if not entirely overlooked.

By the addition of Boracic Acid and a mild rubefacient to the regular Belladonna Plaster formula, several important advantages are secured. The fatty matter in the pores is dissolved by the detergent action of the former, and the glands are expanded and stimulated by the counter-irritative action of the latter, by which means not only is a larger proportion of the medicinal element of the Plaster absorbed, but the therapeutic effect is both increased and more rapidly obtained.



ANTISEPTIC TABLETS.

The increasing demand for antiseptic agents in a convenient form has induced us to prepare Corrosive Sublimate Tablets after the following formula:

Corrosive Sublimate, gr. 7, 3.

Ammonium Chlor., gr. 7, 7.

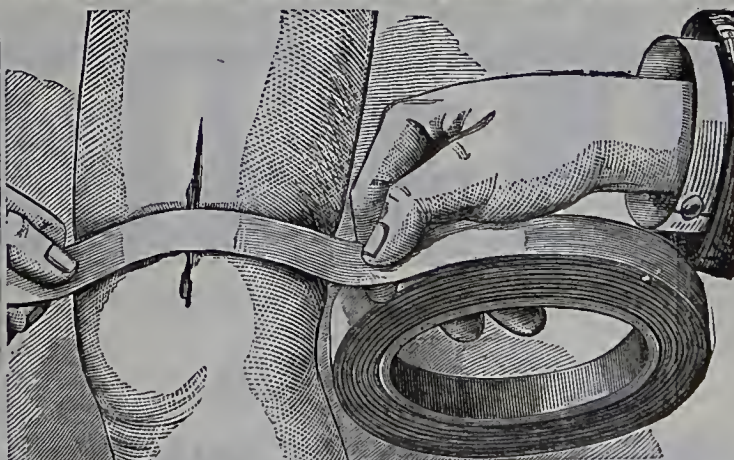
The ammonium chloride is used to make the solution permanent so that the corrosive sublimate will not be precipitated by the organic matter usually contained in water. Each Tablet contains the requisite amount of corrosive sublimate to make a solution of 1-1,000 when added to a pint of water.

ABSORBENT COTTON IN EVEN SHEETS
Rolled with Tissue Paper between them to prevent felting.



Cotton in this form is as easily applicable as an ordinary cloth bandage. Its advantages can be seen at a glance.
Supplied in all sized Packets from 1 oz. to 1 pound.

RUBBER ADHESIVE PLASTER ON HOLLOW CYLINDERS.



Pronounced by Surgeons to be the most convenient form ever devised for adhesive plaster. Besides its convenience it is much cheaper than rubber adhesive plaster on spools. It is put up in widths varying from 1/2 an inch to 3 inches, 5 yards long, in neatly decorated tin boxes.

Our goods can be obtained from all the leading Wholesale Houses in Great Britain and Ireland, and at

1 & 2 AUSTRALIAN AVENUE, LONDON, E.C.

LISTS AND TERMS FORWARDED ON APPLICATION.

When ordering through the Wholesale Houses care should be taken to specify the goods of JOHNSON & JOHNSON'S Manufacture.

FAVARGER'S SYPHONSARE THE
BEST IN THE MARKET.**HEADS PURE TIN,
AND
GUARANTEED FREE
FROM LEAD.****GLASS,****FINEST
ANNEALED.****SYPHONS.****READ**

the following:—

"Edinburgh

"We beg to say that we have used your

"Syphons for many years, and are very well

"pleased with them. We have tried other makers

"but always found yours superior. We think your

"Syphons the best of any we have seen.

"We are, yours truly, H. O. BAILDON & SON."

"Bournemouth.

"We cannot, we think, do better than tell you that of the Syphon

"supplied us by you, and used by us during three successive seasons, we have no

"had one out of order—if we except two with broken tubes; and only one burst,

"and that on first time of filling. The Plating is, we consider, of special excellence

"and wears well. We shall not need to look farther whilst you continue to supply us with what

"we consider the best value in the market.—Yours truly, J. M. DOWDEN & CO."



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FAVARGER & CO., 76 TURNMILL STREET, E.C., LONDON**ROWNTREE'S**

The "MEDICAL PRESS AND CIRCULAR":—

"Certainly this preparation is of delicate flavour . . . It is perfectly soluble . . . the small quantity required for the immediate production of a cup of excellent cocoa will ensure for this 'Elect Extract' a favourable reception at the hands of persons of weak digestion, and all who prefer this wholesome beverage to tea and coffee."

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"Rowntree's Cocoa Extract is one of the best. Its flavour and aroma are good. Cocoa thus prepared is one of the most digestible articles of food."

YORK, ENGLAND.

"ELECT" COCOA.**MILLAR'S BRITISH WINES.****ORANGE** (suitable for Quinine), **GINGER, RAISIN, COWSLIP, CHERRY, &c.****A. MILLAR & CO., Thomas Street, DUBLIN.**

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NATURAL ARSENIO-FERRIC MINERAL WATERS OF**LEVICO**

SOUTH TYROL.

DOSE—One Tablespoonful mixed with Seltzer or Red Wine three times a day.

Price per dozen Bottles, 12/ net; price per 100 Bottles, 88/ net. Delivered free on rail London.

They are particularly valuable in the treatment of Anaemia, Chlorosis, Syphilis, Skin Diseases, Menstrual Disorders, Scrofulous Diathesis, and most especially Nervous Affections of all kinds.

To be had of all Chemists and Druggists.

Agency, 24 Coleman St., London, E.C.

"CYMRY AM BYTH."**"ABSOLUTELY PURE."**

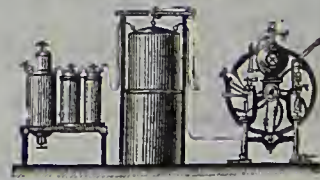
REGISTERED.

**ELLIS'S
RUTHIN
WATERS.****ASK FOR ELLIS'S.**

CAUTION.—Corks branded "R. ELLIS & SON, RUTHIN." Every Label is Registered, and bears Name and Trade Mark (Goat on Shield).

**SOLE ADDRESS—R. ELLIS & SON, RUTHIN,
NORTH WALES.**

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SYPHONS.**Intermittent Apparatus . . . from £17
Continuous . . . £40
Syphons, first quality . . . 1s. 8d.

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146 MINORIES, LONDON E.C.
New York
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SODA WATER MACHINERY

AND ALL ACCESSORIES
FOR THE TRADE

BRATBY & HINCHLIFFE LIM.

HEAD OFFICE
SANDFORD ST. ANCOATS, MANCHESTER

BOXES BOTTLES MACHINERY
ESSENCES
Catalogues, Circulars, Testimonials
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SYPHONS & SELTZOGENES

GREAT REDUCTION IN PRICE.

We have recently been entrusted with a most important Agency for the above-named goods. Our Principals are the best known firm in Paris, and the Syphons are undoubtedly the cheapest and strongest in the market. The tops are made of pure English Tin, guaranteed free from lead. The Seltzogenes are made on the well-known "Fevre" system, and each one is thoroughly tested before being sent out.

WE CAN GIVE TO LARGE AND SMALL BUYERS EXCEPTIONALLY LOW PRICES.
PLEASE WRITE US AT ONCE FOR PRICES, STATING QUANTITY OF EACH KIND REQUIRED



SODA-WATER MACHINERY.

MELBOURNE EXHIBITION, 1889, UNPRECEDENTED SUCCESS.

We have obtained at the above Exhibition

3 HIGHEST AWARDS POSSIBLE

A feat never accomplished before by any other house supplying requirements for the Aërated Water Trade.

These awards will carry with them **THREE GOLD MEDALS**, which were awarded as follows:—

- 1st—SODA-WATER MACHINERY (Highest Award possible).
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POTTER
AND
CLARKE,
WHOLESALE AND EXPORT
BOTANIC DRUGGISTS

COMPOSITION
ESSENCE
OF
FULL STRENGTH
SUPERIOR FLAVOUR
AND
FINE AROMA.

Price 1/- per lb., W. Quart 11d. per lb.

SPECIAL PRICES FOR LARGE QUANTITIES.

6d. & 1/- Bottles, 3/6 & 6/- per dozen.

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5, 6, & 7 Raven Row, LONDON, E.

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EIGHT PRIZE MEDALS AWARDED

GOODALL'S
HOUSEHOLD
SPECIALITIES.

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Most Delicious Sauce in the World. Bottles, 6d., 1s., and 2s. each.

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The Best in the World. 1d. Packets; 6d., 1s., 2s. and 5s. Tins.

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One 6d. Tin is equal to 25 eggs. In 1d. Packets; 6d., 1s., 2s. and 5s. Tins.

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Delicious Custards without Eggs. In Boxes, 2d., 6d., and 1s. each.

GOODALL'S BLANCMANGE POWDER

Delicious Blancmange in a Few Minutes. Boxes, 6d. and 1s. each.

GOODALL'S QUININE WINE, B.P.

Best Tonic yet Introduced. Bottles, 6d., 1s. and 2s. each.

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Makes the Best Ginger-Beer. Packets, 3d. and 6d.

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For Painting Stoves, Grates, Iron, Tin, &c. 6d. and 1s. Bottles.

GOODALL'S LAVENDER WATER.

A Rich and Lasting Perfume. Bottles, 1s., 2s. and 5s. each.

GOODALL'S PLATE POWDER,

For Polishing and Cleaning all Metals. Boxes, 6d., 1s. and 2s.

GOODALL'S JELLY SQUARES,

Make a Delicious and Nutritious Jelly In $\frac{1}{2}$ -pint, 1-pint, and Quart boxes, 3d., 6d., and 1s. each.
boxes, 3d. and 6d. each.

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PATENT MEDICINES
AND
DRUGGISTS' SUNDRIES.

Monthly Price List of Patent Medicines, Druggists' Sundries, &c., will be sent post free on application to

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TELEGRAPHIC ADDRESS—"IDRIS KENTISH TOWN."

IDRIS & CO.

The Largest Syphon Fillers in the United Kingdom.

SODA. Brilliant, Pungent, and Sparkling.

POTASH. Prepared according to the British Pharmacopœia.

SELTZER. Pure and Delicious Table Water.

LITHIA of guaranteed strength.

LEMONADE. Pure fruity flavour of ripe Lemons.

PURITY. Water filtered by a special process, by which absolute purity is guaranteed. Distilled water used as required. Pure Chemicals only employed. All Goods are regularly subjected to strict analysis.

ELEGANT SYPHONS. Best Block Tin or Silver-plated Tops. IDRIS & Co. make their own Syphons, and can therefore guarantee freedom from deleterious metal.

LOWEST PRICES for Water, both in Syphons and Bottles. Write for Price List.

PROMPT DELIVERY by our Vans in London and Suburbs. Customers called on regularly once or twice a week. Country orders despatched same day as received.

IDRIS & CO. now supply a larger number of the London Hospitals, Public Institutions, and Chemists, than any other Manufacturers, which is in itself a sufficient guarantee of the excellence and purity of the Waters supplied by them.

"I have examined the Mineral Waters prepared by IDRIS & CO., and find that in regard to Chemical purity and brilliancy, they are unsurpassable."

JAMES EDMUNDS, M.D., M.R.C.P. Lond., &c.

Medical Officer of Health and Public Analyst to St. James's, London.

IDRIS & COMPANY,

KENTISH TOWN, LONDON, N.W.

BRAGG'S

Undoubtedly the most natural preventative and curative agent in all cases of Indigestion, Disorders of the Liver, Fevers, Cholera,

Dysentery, &c.

The trade cannot do better than keep these old-established and safe preparations under the notice of their customers.

VEGETABLE CHARCOAL.

SOLE MANUFACTURER—

J. L. BRAGG, 14 WIGMORE ST., LONDON.

SHOW CARDS AND COUNTER BILLS ON APPLICATION.

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PACKING CASE MANUFACTORY AND STEAM SAW MILLS.

ESTABLISHED 1840.

37 & 38 MINORIES, LONDON, E.C.

MANUFACTURER OF

Cases of every description for Home use and Exportation.

Wine Laths, Oak and Deal.

Mineral Water Bin Cases and Trays.

Bottle Crates. Straw Envelopes.

Cases Lined with Tin, Zinc, Copper, &c.;

ALSO MANUFACTURERS OF THE

"Acme" Incubator & Poultry Appliances.

PRICE LISTS FORWARDED ON APPLICATION.

EXPORT ORDERS RECEIVE SPECIAL ATTENTION.

CIGARS, ETC.

At the Lowest Wholesale Prices.

La Juana 10/6 per 100, Sold at 2d. each.
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El Sol Habaners,
Havannah 1885 Crop } 22/ per 100, Sold at 4d. each.
&c. &c. TOBACCO, CIGARETTES, &c.

Samples on receipt of 1s. 6d. in Stamps.

BEWLAY & CO., LTD.

Tobacco Manufacturers and Cigar Importers,

49 STRAND, and at 143 CHEAPSIDE, LONDON.

ESTABLISHED OVER 100 YEARS.

First Honours for Sealing Wax wherever exhibited.

"LEON" BRAND

DISPENSING WAX

OF BRILLIANT COLOUR.

A Special Series of Six qualities.

Sealing Wax, Parcelling Wax, Bottling Wax,
Mail and Bag Wax, of great adhesive power,
and for every purpose.

GEO. STEWART & CO.

3 DYERS' BUILDINGS, HOLBORN, E.C.

And all Wholesale Houses. WORKS—EDINBURGH.

HAYWARD TYLER & CO.

SOLE MAKERS OF THE

HAYES-MACDONELL

STEAM BOTTLER.

Syrups, Fills, and
Corks

60 to 70 dozen
per hour.

SHOWROOMS—

84, 85 WHITECROSS
STREET, [1]
LONDON.



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SPECIALLY PREPARED FOR

MINERAL WATER MANUFACTURERS
AND
CONFECTIONERS

MANUFACTURERS OF HIGHLY CONCENTRATED

SOLUBLE FRUIT ESSENCES

MANCHESTER





ROBINSON'S LIEBIG'S BEEF WINE.

Composed of Liebig's Extract of Beef, Extract of Malt, and sound Port Wine.

REPORT ON BEEF WINES.

From the results of my Analyses of various Beef Wines I have had occasion to examine, none have equalled as regards strength, purity of ingredients, and (of no less importance) the skillful and judicious manner in which the respective ingredients have been proportioned and combined. The Liebig's Beef Wine manufactured by Mr. B. ROBINSON, of Pendleton, Manchester.

It is in every sense a reliable preparation, embodying in a pleasing and palatable form all the acknowledged medicinal and nutritive properties pertaining to Liebig's Extract of Meat, Extract of Malt, and sound Port Wine.

WILLIAM ELBORNE, F.C.S., F.L.S.,

Lecturer on Materia Medica in the Owens College, Manchester (Victoria University).

December 15, 1888.

Introduced 1855.]

ROBINSON'S CONCENTRATED WATERS.

(Introduced 1856.)

One Ounce of these Waters added to Forty Ounces of Distilled Water forms a clear Medicated Water (without filtering), similar in every respect to those prepared according to the directions of the British Pharmacopoeia, and free from all Chemical impurity. They will keep good any length of time in any climate.

Aqua Anethi, Concent., 4/ lb.	Aqua Cinnam. Ver. Consent., 8/ lb.	Aqua Foeniculi, Concent., 4/ lb.	Aqua Pimentæ, Consent., 4/ lb.
" Anisi " 4/ "	" Cassia " 4/ "	" Menth. Pip. " 4/ "	" Rosæ " 8/6 "
" Camphoræ " 4/ "	" Flor. Aurant. " 8/8 "	" Ang. " 8/ "	" Rosæ Virgin. " 10/6 "
" Carui " 4/ "	" Flor. Sambuci " 8/8 "	" Virid. " 4/ "	

The above are put up in Bottles of 4 lb. or 1 lb. and upwards, each of which has the Inventor's Protection Label over Cork.

From the LANCET, July 15, 1883:—"CONCENTRATED WATERS (Robinson's, Pendleton, Manchester).—Among the samples sent to us we find Aq. Anethi, Anisi, Cinnam. Ver., Rosæ, and some dozen of others. Diluted with forty parts of water they form the ordinary waters of the Pharmacopoeia. They are excellent in quality, and will be very useful, especially in country practice. [1]

Wholesale Agents: HARRISON & CO., London, and most Provincial Wholesale Druggists. PREPARED BY THE INVENTOR. B. ROBINSON, MANUFACTURING CHEMIST DISTILLER, AND BREWER OF BRITISH WINES, MANCHESTER



RAIMES' CACHOUS.

RED AND WHITE ROSES,

The most popular Cachou in the Trade.

Size and Shape



FRAGRANT "BOUQUET" CACHOUS



HELIOTROPE



VIOLET



ORANGE BLOSSOM



PRIMROSE



The excellence of the perfume and the superior make of these Cachous create a great demand wherever they are introduced. Price 2s. 6d per lb., 5 per cent. discount. Samples on application. Parcels of 14 lbs. forwarded carriage paid, with a handsome Glass Show Jar gratis (fig. A, No. 5, Maw's list), on receipt of P.O.O. for 33s.

RAIMES & CO., WHOLESALE DRUGGISTS, YORK & EDINBURGH.

INDEX TO ADVERTISEMENTS.

Pages 23-25.

BY SPECIAL
H.R.H. THE DUKE OF
ROYAL



APPOINTMENT TO
CONNAUGHT AND THE
FAMILY.

BOURNE WATERS.

THE PUREST IN ENGLAND.

R. M. MILLS & CO., BOURNE, LINCOLNSHIRE,

MANUFACTURERS OF

SODA, POTASH, LITHIA, AND SELTZER WATERS,
LEMONADE, AND AROMATIC GINGER ALE.

4-dozen and 6-dozen Cases Carriage Paid.

Special attention is invited to our manufacture of

LITHIA WATER.

Each Bottle contains an average dose of Carbonate of Lithia—the recognised Specific for Gout.

THE LATEST SPECIALITY—the Celebrated Artesian Bourne Water in Pints and Quarts for Table Use.

Prices and Pamphlet on application.

Agents appointed.

Messrs. INGRAM & ROYLE, 52 Farringdon Street, Wholesale Agents for the sale of our Waters.

TO ESSENCE MAKERS.

ORANGE AND LEMON PEELS (DRIED and FRESH).

This Season's Peel is now ready, and we are prepared to supply Fresh Orange and Lemon Peels specially cut (free from pith), in small shreds about 1" x 1/8", in a condition most favourable for the manufacture of Essences and the Official Tinctures.

Samples will be sent free on application.

"EXCELSIOR" TABLE JELLIES

IN CARDBOARD BOXES,

Of 1/2-Pint, Pint, and Quart Size, packed in Wood Boxes free.

1/2-Pints, 1/9 per doz.: Pints, 3/3 per doz.: Quarts, 6/ per doz.



FLAVOURS:

Orange, Lemon, Calves' Feet, Vanilla, Raspberry, Noyeau, Cherry, Strawberry, Pineapple, and Black Currant.

CHAS. SOUTHWELL & CO.
DOCKHEAD, LONDON, S.E.

MERCHANTS, SHIPPERS & AGENTS

INDENTORS SHOULD SPECIFY OUR
MANUFACTURE.

Soluble & Fruit Essences,
ESSENTIAL OILS, COLOURS,
 And all requisites for the **AERATED WATER TRADE**
DUCKWORTH & CO.
 AND 102, FENCHURCH ST. Manufacturing Chemists
 LONDON. Corporation St. **MANCHESTER.** *ENG.*

INDENTORS SHOULD SPECIFY OUR
MANUFACTURE.

Our Preparations are **SPECIALLY** Manufactured to meet
the Requirements of the **EXPORT TRADE.**

“PREMIER BRAND” ESSENTIAL OILS.

Concentrated Fruit Essences—Soluble

MANUFACTURED BY

JOHN CUMMOCK

*Who has received Hundreds of Unsolicited Testimonials, also THREE GOLD MEDALS,
besides other Honours.*

Chemists manufacturing their own Aërated Drinks should write for Prices and Samples of the following:—

ESSENCE “SPARKLING LIMETTA”—Soluble “Essence of Lemon”

ESSENCE “LEMON SQUASH”—Essence for Sherbet

ESSENCE “TONIC HEADING”—Essence for Ginger Ale

AND COMPARE WITH OTHER MAKERS.

Manufactory & Offices: **45 ROPE WORK LANE, GLASGOW.**
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LIFE'S RESTORER.

FINEST CONSOMMÉ.

HIGHEST POSSIBLE
HONOURS.

PARIS EXHIBITION, 1889
FOOD
AND COOKERY EXHIBITION,
LONDON, 1889;
&c., &c., &c., &c., &c.



LIQUID EXTRACT OF BEST FRESH BEEF.

A happy thought does not alone constitute a perfect invention; simplicity is needed to make it perfect.

"MAGGI" possesses this quality in a degree that renders it as indispensable in the kitchen as salt and pepper.

"MAGGI" is simply liquid EXTRACT OF BEEF, a teaspoonful of which, added to a cup of hot or cold water, makes at once a perfect BEEF TEA, which anyone, sick or well, will relish.

Two tablespoonfuls to a quart of water (adding Vegetables, &c.) will make a better Soup or Potage than hours spent over the fire.

The improvement in the quality of Gravies, Ragoûts, Stews, Hashes, Roasts, &c., by the addition of a few drops of "MAGGI," is amazing.

Unlike all other Extracts of Meat, "MAGGI" is most delicious, does not need the addition of salt and pepper, can be used by the most inexperienced, produces as good a Consommé or perfect Clear Soup as any first-class cook can prepare by the most elaborate and expensive means, and keeps good in any climate.

Soup Stock is now rendered unnecessary, as "MAGGI" is better, cheaper, and more nutritious for the sick, convalescent, and healthy.

In 2-oz., 1-lb., & 2-lb. Bottles, of all Grocers and Druggists throughout the world.

Wholesale Agents—E. Lazenby & Son; Samuel Hanson, Son & Barter; W. & D. Harvest; Crosse & Blackwell.

PEPTONATE OF IRON

SOLE MAKERS

PEPTONE OF MEAT

DENAEVER'S

LIQUID PEPTONES STERILIZED

Free from microbes!
Keep good for ever in all climates.
118 BISHOPSGATE STREET WITHIN, LONDON, E.C.

DENAEVER'S PEPTONATE OF IRON. A bland, non-irritating and most easily assimilable ferruginous preparation. For debilitated constitutions, children, and aged people.

DENAEVER'S PEPTONE OF MEAT. A powerful restorative for all ailments of the stomach, stimulates general nutrition. Is retained when the stomach rejects all other food. Pleasant to taste.

Of all Chemists and Wholesale Houses.

HUGO BROWN & CO.

41 Ormond Street, LIVERPOOL,

SOLE AGENTS IN EUROPE FOR LIEBIG'S

EXTRACT OF BEEF

MADE BY

MESSRS. A. SANTA MARIA & CO.
PAYSANDU.

Sold as imported in cases of two tins each, weighing together, about 112 lbs.

CHEMISTS' TEA AGENCY.

WALKER & DALRYMPLE'S

BROKEN-LEAF TEA, 1s. 8d. per lb.

A MONEY SAVING TEA, ABSOLUTELY PURE.

The small leaf from some of the finest India and China Teas. Produces a Tea in the cup, stronger, richer, and cheaper than most whole-leaf Teas. Agents appointed, where unrepresented, throughout the United Kingdom.

WALKER & DALRYMPLE'S

INTERMEDIATE TEA, 2s. per lb.

BEST at the PRICE EVER SOLD. Great strength, and a most useful Tea where there is a large consumption. Recommended to all who wish to SAVE in their Tea. Agents appointed where unrepresented throughout the United Kingdom.

WALKER & DALRYMPLE'S TEAS.—

AGENTS APPOINTED, where unrepresented, throughout the United Kingdom.

Prospectus and Samples Free on Application.

Warehouses, 154, 155, 159, and 160 WHITECHAPEL ROAD, and 2, 4, 6, 8, 10, 11, and 12 BRADY STREET, LONDON.

P.O.O. payable at head office. Bankers, the National Provincial Bank of England.



PEDESTAL.

TYRER'S

1d. sizes



BOTTLE.

MENTHOL

6s. gross



VASE.



FIG. A.

INFLUENZA

CURED BY

MENTHOL.

Dr. LENNOX BROWNE says:—"It kills the microbe of infection."—*Vide MEDICAL PRESS AND CIRCULAR, January 8, 1890.*

2d. Size, as Fig. A, 12s. gross, stained and varnished, all put on $\frac{1}{4}$ -gross cards with ELASTIC. Sample free.

PETER TYRER, 70 LONG LANE, BOROUGH, LONDON, S.E.

BOVRIL

IN THE "LANCET" OF NOVEMBER 11, 1865,
BARON LIEBIG SAYS:—

"Were it possible to furnish the market at a reasonable price with a preparation of meat, combining in itself the albuminous together with the extractive principles, such a preparation would have to be preferred to the Extractum Carnis, for it would contain all the nutritive constituents of meat." Again—"I have before stated that in preparing the Extract of Meat, the Albuminous principles remain in the residue, they are lost to nutrition, and this is certainly a great disadvantage."

"BOVRIL" contains the albumin and fibrine in the most perfect possible form, and to those who know the requirements of the human system and the constituents of food, it will be apparent that this albumen and fibrine is identical with what the body requires for recuperation, and that as a perfect form of concentrated nourishment it must supersede any animal aliment at present known.

"BOVRIL" has solved the problem of the great German Chemist.

"BOVRIL" is Baron Liebig's ideal realised.

OFFICES:—30 Farringdon Street, LONDON.

WILKINSON'S COMPRESSED

They are introduced to the public to enable them to make their own HOP BITTERS, YEAST, HOME BREWING, and numerous other purposes. Full particulars given in each packet.

Samples and Prices sent on application to

A. WILKINSON & SONS, 37 CANNING PLACE, LIVERPOOL.

P.S.—Chemists will naturally see the great advantage in making their own Bitters from the Pure Hop itself.

Dealers in every description of Isinglass.

Best Hops compressed into small parcels of one pound and half-pound, and sent out in cases containing 30 lbs. each. These hops are specially selected and compressed for keeping purposes, and will retain their aromatic strength for a considerable time.

ENGLISH HOPS.

"RAMORNIE."**LIEBIG'S**

Extract of Meat.

As supplied to the Admiralty, War, and India Offices.

1-lb. Jars.....	per lb.	6/9		per doz.	81/0	2-oz. Jars.....	per lb.	7/8		per doz.	11/6
1-lb. Jars.....	"	7/0		"	42/0	1-oz. Jars.....	"	8/4		"	6/3
1-lb. Jars.....	"	7/3		"	21/9	1-oz. Jars.....	"	8/8		"	3/3

QUOTATIONS FOR EXTRACT IN "BULK" ON APPLICATION.

Write for Detailed Price List to the Australian Meat Co., 9 and 11 Fenchurch Avenue, E.C.

6 lbs. Carriage Free.

DRUGGISTS' CONFECTIONERY.

ROBERT GIBSON & SONS,

Medicated Lozenge Manufacturers,
CARLTON WORKS, ERSKINE STREET, HULME, MANCHESTER,
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[1890.

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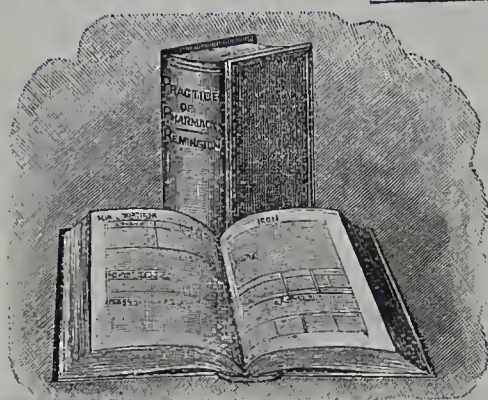
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Subscription 10s. per year, payable in advance; dating from the commencement of any month.

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THE CHEMISTS' AND DRUGGISTS' DIARY 1890.

We cannot supply any more extra copies of this work. The demand for it has been this year quite unprecedented.

POST-CARD COMPETITIONS, 1890.

THE PILL-MILL.

We ask competitors this month to estimate the actual average number of pills supplied to the public every day in the British Isles. They should base their calculations on facts within their range of knowledge. They can, for example, reckon from a week's trade how many of their own stock pills they sell daily, how many factory-made pills they have sold, how many they dispense, and about how many are contained in the patent medicines they supply. Finding thus their own daily average, they may roughly multiply this by 10,000 for the quantity sent out by chemists, and this total must be further very largely developed by adding what they think medical men, grocers, and others send out. We only want for competition the one total figure in numerals. This must be stated exactly, not in dozens or grosses or thousands. We shall add all these figures together, and

give the usual guinea prize to the competitor who gets nearest to the average.

Subscribers and their employes only are eligible to compete. No card will be admitted which reaches us after February 28, and no person may send in more than one card.

We shall be obliged to any competitor who will on his card, besides the figure, give us information or data which will assist us in forming a general estimate.

We may state, for the benefit of some clever jokers, that obviously absurd estimates will be excluded from the calculation.

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THIS work has been written for us by Mr. E. N. Alpe, of the Solicitors' Department, Inland Revenue Office, Somerset House, who has had a wide experience in and intimate knowledge of the administration of the Acts which regulate the sale of proprietary medicines. The Handy Book is, consequently, of exceptional value to chemists and druggists, more especially in showing how medicines are made liable to stamp-duty by labelling, circulars, and the like. Reviewers have been unanimous in stating that the work is not only complete, but interesting and invaluable. It is as free as possible from legal phraseology, is readable, and is nicely got up. Price 2s. 6d., or by post 2s. 9d. May be obtained through the wholesale houses in the same way as "The Art of Dispensing."

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ADVERTISEMENTS of situations vacant and wanted, businesses for disposal, &c., will be received by us up till the first post on Friday morning.

Metropolitan Reports.

CHEMISTS' ASSISTANTS' ASSOCIATION.—At the next meeting of this Association a paper on "Crystallography in its Relation to Pharmacy" will be read by Mr. T. S. Dymond, F.I.C.

WESTMINSTER COLLEGE PHARMACY CLUB.—The first meeting of the session was held at Anderton's Hotel, Fleet Street, on Thursday evening, January 30. The president, Mr. G. S. V. Wills, took the chair. Messrs. Bilby, Portlock, Frank Saunders, Weston, Jackson, Marshall, and Knight Pearce contributed songs and recitations.

THE HOLBORN UNION DISPENSERS.—The Local Government Board wrote the Holborn Guardians on Wednesday, ratifying the appointment of Mr. H. Hewitt as second dispenser, subject to his obtaining the licence of the Apothecaries' Society or the Pharmaceutical Society. The salary is 75*l.* per annum.

DEATH OF A CHILD THROUGH CARBOLIC POISONING.—On January 29 a child, named William Robert Bennett, aged 2½ years, the son of a plumber living at 7 Commercial Terrace, Greyhound Lane, Streatham, died through drinking carbolic acid. It appears that the child's mother placed a saucer containing carbolic acid, which had been used for disinfecting purposes, upon the kitchen table, and, during her temporary absence, the little one reached the saucer and drank the contents. Dr. West was called in and attended the child until its death.

THE JUNIOR CHEMISTS' BALL came off on Wednesday night at the Portman Rooms, and was as great a success as ever. At supper Mr. A. Preston occupied the chair, being supported by Mr. S. M. Burroughs, Mr. A. C. Preston, Mr. Francis, and others. In proposing the toast of the evening, the chairman referred to the services which had been rendered to the ball by the honorary secretary, Mr. W. H. Kerr; and, in replying, Mr. Kerr intimated that he would like the committee to look out for a successor to himself. The light fantastic carried the company on to an early hour.

Provincial Reports.

Items of news, and newspapers containing matters of interest to the trade, sent to the Editor will much oblige.

BIRMINGHAM.

GAS EXPLOSION AT A DRYSALTERY STORE.—At about three o'clock on Saturday afternoon a gas explosion, which occasioned injury to two persons and much damage to property, occurred at the warehouse of Messrs. Canning & Co., merchants and drysalters, Great Hampton Row. The warehouse, which is on the second floor, is divided into four parts, and runs from Great Hampton Row a considerable distance to the rear. The apartment facing the street is used for sampling purposes, and it was here that a strong odour of gas was perceived about three o'clock by a warehouseman named William Evans, in the employ of Messrs. Canning. This man, who was in the company of a fellow-workman named Henry Nevitt, struck a match with the view of ascertaining the location of the escape, and there was immediately a terrific explosion which shook the whole building. Evans was thrown violently to the ground and much injured, and Nevitt was shaken. The force of the explosion dislodged bricks forming the skirting of the ceiling, and at the further end of the warehouse the roof itself was blown out.

ADULTERATION OF DRUGS.—At the Birmingham Police Court on Friday, Richard Greenway, chemist, 46 Stafford Street, was summoned by Mr. Parker, sanitary inspector for the city, for selling adulterated sweet spirits of nitre and saffron. The inspector purchased from defendant on December 28 4 oz. of sweet spirits of nitre and a drachm of saffron. He divided the samples into three parts and sub-

mitted one of each to the public analyst. The certificates of the analyst showed that the nitre contained 50 per cent. of added water and the saffron 25 per cent. of mineral matter and 55 per cent. of calendula florets which had been artificially dyed. The defendant said he retailed the drugs as he purchased them. It would be hard if he was responsible for other people's actions. The clerk (Mr. Carter): Can you prove that? Defendant said he could prove it, but it would not pay him to enter into litigation with the parties from whom he purchased the articles, as he would have to leave his business several days. As to the saffron he did not adulterate it, nor could he tell when he purchased it that it was adulterated. He was a retail chemist, not an analytical chemist. He had been in business 22 years and was sorry this had occurred. The magistrate told defendant that he should be careful from whom he purchased drugs. These were very bad cases, and defendant would be fined 2*l.* and costs in the first case and 3*l.* and costs in the second.

BRISTOL.

PRETENDING TO BE A DOCTOR.—At the Bristol Police Court on January 29, Mr. Mayfield Archibald Lilly, 35 Colston Street, was summoned for having falsely pretended to be a doctor of medicine, and also with having exhibited in the window of 35 Colston Street certain printed and written matter of an indecent nature. Inspector Wedmore stated that on January 21 he noticed in several parts of the house, No. 35, and on the window, such notices as, "Dr. H. Lilly's champion remedies"; "champion oil, for neuralgia," &c.; "lung balsam, for consumption, bronchitis," &c.; and, at the back of the window, "Dr. H. L. Lilly's vital tonic cures nervous debility," &c. Dr. Lilly's name was prominent in many places, and the window generally had the appearance of a chemist's shop. The same day, with Chief-inspector Cann, he went into the shop and saw Mr. Lilly. He drew attention to the words relating to "nervous debility," and told him that, under a new Act of Parliament, which came into force in the present year, it was an offence to expose to view such words in a public thoroughfare. He also read section 5 of the Indecent Advertisements Act, in which the words "nervous debility" were mentioned as constituting an offence. Mr. Lilly replied that he had not a copy of the Act, and he did not know that it was wrong, and also immediately removed the notice from the window. He then drew his attention to the words, "Dr. H. L. Lilly," painted on the glass door leading from the shop into the passage which communicated with the street, and Mr. Lilly said that he did not practise as "Dr. H. L. Lilly," but only sold his medicines, of which he was the patentee. Chief-inspector Cann corroborated this evidence. Mr. Clifton, on behalf of the defendant, said the medicines had been patented, and the Inland Revenue had received the duties payable in respect to them. There was no evidence to prove that Mr. Lilly had pretended to be a doctor of medicine. In a prominent place outside the shop were the words "Professor and Madame Lilly," and a projecting signboard was similarly inscribed. There was, he was instructed, a Dr. H. L. Lilly in the north of England, who was a very clever man and a renowned herbalist, and it was his medicines of which the defendant was patentee and vendor. The Act of Parliament had only very recently come into force, and these were the first proceedings of the kind that had been instituted in Bristol. On the second summons he argued that the defendant was entitled to an absolute acquittal, as the context of the section of the Act deprived the words of their criminality. The magistrates considered the first charge proved; but, considering the promise that had been made that the words would not be used again, they would only impose the mitigated penalty of 10*l.* and costs. The second charge they also held to be proved, but as the Act had only so recently come into force, and the objectionable notice had been immediately removed, a fine of 10*s.* and costs only would be inflicted.

LIVERPOOL.

CHEMISTS' ASSOCIATION.—The next meeting will be held on Thursday, 13th inst., when the president will deliver his inaugural address.

THE APPEAL CASE.—The amount of 25*l.* 13*s.*, collected in Liverpool towards the expenses of the appeal in the case of the Pharmaceutical Society *v.* Wheeldon, has been handed over by Mr. Parkinson, treasurer, to Messrs. Williams & Foster.

PHARMACEUTICAL STUDENTS' SOCIETY.—At the last meeting the president, Mr. H. Wyatt, jr., announced the following donations to the library and museum:—A materia medica cabinet from Messrs. Southall Bros. & Barclay; and a copy of Remington's "Practice of Pharmacy" and specimens of strophanthus from Messrs. Burroughs, Wellcome & Co. Thanks were voted to the donors.

APPROACHING VACANCY.—It is understood that the dispensership of the Royal Infirmary will become vacant at the end of next month. Mr. Allan, who has filled the position some 5 or 6 years satisfactorily, having purchased three shops in Everton and neighbourhood, vacates the post to take the management of these. The dispenser has the opportunity of training medical students in pharmacy, for which he receives certain fees in addition to his salary.

TRADE COMMITTEE.—When the local Trade Association amalgamated with the Chemists' Association it was understood that the work of the former body would be carried out by the formation of a trade committee, but on the question coming up for consideration by the council some two years since, it was, after considerable discussion, adjourned *sine die*. The matter was again discussed at the annual meeting last week, some holding that a small committee could be more readily summoned and could deal better with the details of trade questions, whilst others held that the council, as a whole, had shown considerable activity with regard to trade matters, and that it was, therefore, unnecessary to appoint a committee for the purpose. Ultimately it was decided to ask the council to deal with the matter at an early meeting.

MANCHESTER.

THE SAD STORY OF THE MANCHESTER PHARMACEUTICAL STUDENTS' ASSOCIATION.—This society was started about six years ago under the presidency of Mr. (now Professor) A. H. Jackson, B.Sc., Melbourne. For a while the meetings were held at the Owens College, and they were eminently successful. By-and-by, however, interest diminished and the attendance declined. Saturday afternoon excursions were organised to chemical works in the district, and it was hoped that this might do something to keep up the interest of the old members and to enlist new, but it was soon found that something more than this was needed. A change of meeting-place to more central rooms was next tried, and headquarters were shifted to the Blackfriars Hotel. If the Owens College was bad, the Blackfriars Hotel proved worse, many employers refusing to allow their apprentices to attend meetings in a public-house. A smoking concert was held, and this was a great success. It gave rise to hopes which were but short-lived. When the time for business came round again the attendance was meagre in the extreme, and, in truth, the papers read were of so little value that they hardly deserved a better fate. Another session was entered upon. The president's opening address was announced, and he had for audience only the secretary and treasurer, notwithstanding that a special whip of thirty extra post-cards had been sent out. For the next meeting a paper by a prominent member of the committee was announced, but only three or four members put in an appearance, not sufficient to form a quorum. It has been felt for some time that it was a pity to prolong the death struggle of an association which never showed much vitality, and a meeting was held last week to consider what should be done. It was then resolved unanimously that the society should be dissolved, and that the remaining funds be handed over to the Benevolent Fund of the Pharmaceutical Society of Great Britain.

MANCHESTER PHARMACEUTICAL ASSOCIATION.—Under the auspices of this association a supper was held on Tuesday night at the Spread Eagle Hotel. Invitations had been issued to all the registered members of the trade in the district, but the response was not so liberal as was expected, the attendance, all told, numbering only about fifty, which included no fewer than fifteen from one establishment in the

city. It is noteworthy, and, perhaps, not altogether unsatisfactory, that those present consisted for the most part of the younger generation of pharmacists. Councillor Robert Gibson made a genial and in all respects admirable chairman, and he was supported by Mr. G. S. Woolley, Mr. W. Wilkinson, and Mr. W. Boden. After supper the loyal toasts were proposed from the chair and duly honoured. Then Mr. Gibson gave "The Manchester Pharmaceutical Association," to which Mr. Wilkinson, the vice-president, and Mr. G. S. Woolley replied. In the course of the remarks in reply it was stated that the association was doing good work, but wanted more members. If more members were secured the subscription might be reduced from the present figure of 5*s.* to 2*s.* 6*d.* The meetings, it was added, were not so dry as some people supposed, opportunity being given at the close of each meeting for a little social intercourse. Amongst those who contributed to the harmony of the evening by songs, &c., were Messrs. H. Kemp, A. C. Vallance, W. Hedley, W. Lane, John Whitehead, and C. G. Wood (Oldham). The proceedings, which were, on the whole, of rather a quiet description, were concluded with a hearty vote of thanks to Mr. Gibson for presiding, accorded on the motion of Mr. John Blyton.

Mr. L. Siebold will read, at the next meeting of the Manchester Pharmaceutical Association, to be held at the Victoria Hotel next Wednesday, "A further Note on Arsenic in Glycerine."

IRELAND.

THE DUBLIN DEATH RATE.—The city chemist reports the startling fact that last week there were registered no less than 325 deaths, being an increase of 107 over that of the corresponding week last year.

SERIOUS FIRE.—The premises of Mr. Henry Taaffe, chemist and druggist, of Londonderry, were burned to the ground on Saturday last, February 1. For a time an entire block in the business centre of the city was threatened. The loss is stated to be partially covered by insurance.

DEATHS.—The following deaths are announced:—January 30, at 10 Bentinck Street, Belfast, Mr. T. J. Ponsonby-Brabazon, L.P.S.I., aged 24 years; and, on the same date, suddenly, the wife of Mr. P. Merrin, M.P.S.I., the Medical Hall, Camden Street, Dublin.

ROYAL TRADERS.—Official notice was last week received that the Lord Chamberlain has appointed Messrs. Hamilton, Long & Co., and John Evans, Dublin, to be royal chemists and apothecaries, with the permission to use henceforth the State insignia.

STRETCHING IT.—Examiner: "Now, Mr. Murphy, while on the subject of physical science, what are the properties of heat?" Murphy, a Tipperary candidate for the licence: "Expanshun, surr." "Correct. Give me an illustration." "In summer, surr, the sun, being hotter, causes the days to lengthen."

A LOVER OF CLOVES.—An amusing case has been heard at the Dublin Sessions, in which a John Campbell, an employé of Messrs. Leverett & Frye, druggists and mineral-water manufacturers, sued the firm for damages in respect to alleged wrongful dismissal, the cause of which was stated to be the plaintiff's weakness for chewing cloves when attending customers. The Recorder gave a decree for 3*l.*

SEQUAH IS COMING.—The Cork corn market trustees had under consideration last week a personal application from the secretary and manager of Sequah for the use of a plot of ground, on which they proposed to give lectures during the coming month on the properties of their medicine, the "Prairie Flower." The application, subject to certain conditions, was granted, the company to pay 5*l.* for the privilege accorded them.

DISPENSARY OFFICERS.—The guardians of South Dublin Union will, on Thursday, February 11, elect a dispensary officer for the Peter Street Dispensary at a salary of 125*l.* per annum. Several apothecaries are already in the field.—Mr. Clery, dispensary officer to the Kilmallock Union, has resigned his post in consequence of bad health.—The dispensary and compounding departments at Murragh are at present vacant. They will be filled by an appointment to be

made in the course of the next fortnight.—The dispensing officials of the South Dublin Union have petitioned the authorities to place them on an equality as regards salary with their *confrères* of the northern district.

CHEMISTS AND DRUGGISTS' ASSOCIATION OF IRELAND.—A committee-meeting of the Dublin branch of this association took place on Monday, February 3, at 46 Mary Street, Dublin, Mr. Samuel P. Boyd, A.M., occupying the chair. The following were present:—Messrs. Johnston (hon. treasurer), Hanson Smith, Greenfield, and Dowling (hon. secretary). A letter was received from Mr. W. J. McNeight (president), regretting that an attack of diphtheritic sore-throat kept him away. The arrears of business which, owing to the recent illness of the hon. secretary, had accumulated were quickly disposed of, and the hon. treasurer was directed to pay a couple of small accounts. The surplus funds of the association were directed to be lodged in the Sackville Street branch of the Royal Bank of Ireland, in the joint names of the president, vice-president, and treasurer. The hon. secretary was directed to write to Sir James H. Haslett in connection with his promise recently given to prepare, for the information of the present Attorney-General, a detailed statement in reference to their interview, already recorded in a former issue. Fear was expressed lest the undue delay of the document should jeopardise the success of the scheme. Sir James was asked to expedite the report, in order that the right hon. gentleman might receive it before the opening of Parliament. Mr. Dowling, who, in consequence of illness, had tendered his resignation of the secretaryship of the Dublin branch, yielded to general solicitation to resume the duties for the present. Mr. Johnston suggested that the office of secretary should become a salaried one. The proposition was well received, but no action resulted. A committee was appointed to arrange for the annual general meeting of the association towards the end of the month. It was resolved to secure, if possible, the Molesworth Hall, for the purpose of entertaining the members to a social evening's programme, similar to the annual meeting of the Belfast branch held a few days ago. After some routine business the committee adjourned.

SCOTLAND.

ABERDEEN.

LA GRIPPE.—The influenza has been running here for the past three weeks, and does not yet seem to be abating. Chemists and doctors have had a busy time of it. Chemists, on the whole, seem pleased to have had the little turn, the only complainers being contractors. The contractors to St. Nicholas parochial board applied for compensation under section 5 of "Specifications," which goes on to say "that during the prevalence of cholera and other epidemics the board reserves the right of dividing the parish into districts, and appointing chemists to supply such districts without prejudice to the contractor." It goes without saying that the board could not see it.

ABERDEEN AND NORTH OF SCOTLAND SOCIETY OF CHEMISTS AND DRUGGISTS.—The annual assembly was held in the Music-hall Buildings on the evening of Wednesday, January 29. The company assembled at 9 o'clock, and dancing was immediately commenced. Amongst others present we observed Drs. Davidson and Presslie, Messrs. J. and S. Paterson, Mortimer, G. J. Shepherd, Giles, Ritchie, G. P. Cruickshank, Reid, Sutherland, Clark (of J. J. Urquhart), Johnstone, jun., A. Strachan, and John Clark (of Messrs. Langton, Edden, Hicks & Clark). There was also a contingent of the younger members of the craft from Dundee present. The arrangements seemed to be almost perfection, and the decorations in the ballroom were light and chaste. An open table for refreshments was kept during the evening. Mr. A. Royal and Mr. J. Spence undertook the duties of M.C., and gave satisfaction to all. The party lasted till about 3 A.M. About 130 double tickets were issued.

THE "APOTHEKE ZUM MOHREN," the Pharmacy of the Moor, in the City of Nuremberg, Germany, has celebrated the 400th anniversary of its existence, having been established in the year 1489.

FRENCH PHARMACEUTICAL NEWS.

(From our Paris Correspondent.)

THE INFLUENZA EPIDEMIC is now considered entirely over, the number of deaths for the past week not exceeding the usual Paris average for the season. The total loss of life chargeable to the plague is estimated to have been 5,000 in round figures.

MADAME PLANCHON (*née* Eglé Leenhardt), wife of the director of the Paris College of Pharmacy, died on February 3, after a long illness, at the age of 53.—The Paris Society of Pharmacy, in token of respect and sympathy for their perpetual secretary's bereavement, adjourned their meeting, appointed for Wednesday evening, to February 12.

SCARCITY OF MEDICINAL FLOWERS.—One of the effects of the recent epidemic has been a considerable consumption of dried flowers popularly used for infusions, such as borage, corn poppy, marsh mallow, coltsfoot and linden-tree flowers. The supply in stock has run very low, and none can be expected before the coming season.

PROFESSOR JUNG FLEISCH, of the Paris College of Pharmacy, was at the last sitting selected by the Academy of Sciences as its choice for the chair of mineral chemistry now vacant at the Arts-et-Métiers Conservatory. As the Minister almost invariably adopts the Academy's recommendations in such matters, the choice is about equivalent to an appointment.

THE COLONIAL HEALTH SERVICE.—For some time past the colonial hospital service has been left to navy physicians and pharmacists, but for several reasons, especially the inevitable mutations of the incumbents, it has been thought advisable to return to the former system (1835 to 1866), somewhat improved, of having a separate service. Consequently, in accordance with Minister Tirard's advice, President Carnot, on January 9, issued a decree reorganising the health service for colonies and protected countries. To speak only of the pharmaceutical branch, the new incumbents will rank as follows:—The pharmacist-in-chief of the first class shall have a grade equivalent to that of colonel, and 12,621f. a year; second class, lieutenant-colonel (10,137f.); pharmacist-principal, chief of battalion (9,050f.); pharmacist of the first class, captain (6,444f.); of the second, lieutenant (5,040f.). To join the service candidates must be of French nationality, less than 28 years of age, graduated pharmacists of the first class, and of course able-bodied. On February 1 a medical inspector and a physician-in-chief were appointed for the medical branch, but no one has been so far for the pharmaceutical.

COLLEGE PRIZES.—The list of prizes to be competed for this year is as follows. The college, as usual, offers to first-year students a prize consisting of a silver medal, 50f. worth of books, and a dispensation from yearly dues; also a second prize of a bronze medal and 25f. worth of books. To second-year students, a silver medal, with 75f. in books, and dispensation, and a bronze medal with books worth 25f. To third-year students, a 500f. gold medal, with dispensation from examination fees, and a bronze medal with 25f. in books. Seven silver medals are also offered for the various laboratory classes. The prizes founded by bequests to be awarded this year are the following: The Menier prize (600f. and a silver medal), for proficiency in materia medica and detection of adulterations. The subject for essays this year will be the pharmaceutical products of the Polygala family. Desportes prize (700f.), for botany and micrography. H. Buignet prizes (600f. and 400f.), for proficiency in physics and manipulations. Laillet prize (500f.), for proficiency in pharmacy. To the foregoing we may add the Laroze prize (500f.), offered to graduates of the first or second class, for the best memoir on a method to prevent errors in qualitative analyses.

FISCHER'S "EPILATOIRE," a preparation for the hair which has met with favour in Vienna, has been found by Gawalowski to be a 1.3 per cent. solution of hydrogen peroxide with a little honey or glucose syrup. It also contains a little free sulphuric acid.

General and Provincial News.

DEATH AT A FIRE.—At a fire which occurred at Totnes, on January 29, the son of Mr. Michelmores, chemist, was burnt to death.

THE important oil works of Perdomo & Barroil in Marseilles have been destroyed by fire; about 1,500 tons of oil seeds and 200 tons of oil were lost in the flames.

INFLUENZA.—Druggists in all the principal towns of the United States had, simultaneously with their *confrères* on this side, a busy time of it with *la grippe* prescriptions and remedies.

It was twenty-five years ago on January 22 that Professor Kékulé propounded the theory of the benzene-ring. The occasion was suitably celebrated by the Berlin Society of Chemistry.

CARBOLIC ACID AS A BEVERAGE.—Some carbolic acid was being used on Saturday at the Southampton Workhouse, and a man asked one of the inmates to have a drink. The man seized the bottle and drank, dying a few minutes afterwards.

POISONED BY COUGH-MIXTURE.—On Friday, January 24, a man named Loughan was found dead in his bed at Dunganon. He had purchased a bottle of cough-mixture the previous evening from a local chemist, to be taken in 23 doses; but he drank the whole at once.

ROYAL COLLEGE OF SURGEONS.—On January 30 a deputation representing the Association of Members of the Royal College of Surgeons attended on Lord Dunraven for the purpose of obtaining his consent to introduce a Bill into the House of Lords, giving the members the right to elect their governing body. Lord Dunraven, after hearing Mr. Danford Thomas and other members, promised the matter his full consideration.

FIRES.—On January 30 a fire broke out at the premises of Messrs. Taylor & Co., patent-medicine vendors, &c., New Arcade, Sunderland. The flames spread quickly, but the fire-brigade kept them confined to the top rooms, where they originated. The stock, which is insured, was much damaged by the water poured on to the flames, but it is hoped business will be resumed in a day or two. The premises are also insured.—The shop occupied by Mr. Walklate, homœopathic chemist, High Street, Bristol, was completely gutted by a fire which occurred there on Wednesday morning, and by which adjoining property was also much injured.

ILLEGAL SALE OF POISON.—Joseph Hawkins, grocer, of Westwood, was charged at the Mansfield Police Court, on January 30 with illegally selling poison. Police-constable Asher stated that on December 13 he visited the defendant's shop, and Mrs. Hawkins supplied him with a packet of vermin-killer, for which he paid twopence. No register was kept, but Mrs. Hawkins said she usually asked persons who bought the powder their names, and asked him for his. On analysis of half the powder, it was found that it contained sufficient strychnine to destroy the life of an adult. A fine of 40s. and costs was imposed.

A POISONED SPRING.—The inhabitants of the hamlet of Cippyn, Cardigan, were very much concerned last week at a rumour which had got about that a spring in the neighbourhood had been poisoned. On the Monday a gander from a neighbouring farm was found dead near the spring, and from the fact that the body showed symptoms of poisoning a thorough search was organised, which resulted in the finding of a jar of phosphorus paste, close to a recently erected cow-shed. Phosphorus was found in the water, and the matter is now in the hands of the police for investigation.

SEQUAH AT KING'S LYNN.—Sequah has arrived at King's Lynn with gilded coach, brass band, and other paraphernalia complete. His fame has evidently preceded him, and notwithstanding the fact that the town crier has publicly warned the people to beware of being gulled, Sequah is attracting large crowds. Up to the present his attentions have been confined to tooth-drawing and the cure of rheumatic and other pains, with the aid of the renowned oil, in public.

Whether he will have as large sales here as elsewhere remains to be seen, but in the meanwhile he has completely ousted his rival the Scopy, who arrived at Lynn before him.

A MEMENTO.—At the installation of the new master of the Savage Club Masonic Lodge on Tuesday evening, the *Daily News* states, in the course of the proceedings which preceded the banquet, Mr. Paige, the secretary, created a great impression by reading a letter from Mr. H. S. Wellcome, which was decidedly sensational. Mr. Wellcome, as is well known, expended much money and time in an endeavour to unravel the mystery of the death of the first secretary of the Lodge, Mr. Archibald McNeil, at Boulogne, and he sent a sad memento of the event in two water-stained bank-notes amounting to 25*l.*, which were found on the person of the unfortunate gentleman, as a donation to the benevolent fund of the lodge.

CARBOLIC POISONING.—Mr. Coroner Baxter held an inquiry at the Town Hall, Poplar, concerning the death of Sarah Elizabeth Goodwin, aged 35 years, of 10 Galbraith Street, Poplar. Henry William Goodwin, the husband, stated that his wife, who had recently been ill, expressed a wish on Monday, January 27, to have some port wine. He went out for some, and on returning he found her nearly speechless, supported by three women. He ran for a doctor, telling him that his wife had taken carbolic acid, but he refused to come, saying witness was drunk. Mary Purchase stated that last Monday she kept deceased company whilst her husband went out. She appeared ill, but cheerful. About 8.30 she was seized with a fit of coughing. She could not account for this, and in consequence went for assistance. It was then she noticed a bottle in deceased's hand, and exclaimed, "You have taken the wrong bottle!" The bottles, however, were of different shape. Dr. William Murray, of 531 Manchester Road, deposed that he was called on Tuesday, about 12.10 A.M., to see the deceased, whom he had known for the last six years. He found her in the last stage of collapse. He bled her in both arms without success, and she died about ten minutes after his arrival. Death was due to shock resulting from an irritant poison. The jury returned a verdict of "Death from misadventure."

ACCORDING to the figures published in the *Pharm. Weekblad voor Nederland* the recent examinations for chemists' assistants (Minor examination) in Holland do not show quite so favourable a result as regards the female candidates as has been the case during the last two or three years. It has been a significant fact that at almost every previous examination the percentage proportion of passes among the female candidates has been very much larger than among the male aspirants. This time the gentlemen seem to have pulled themselves together and recovered some small part of the lost ground. At the examinations held in November and December 45 ladies presented themselves, and 22 were successful, while of the 60 gentlemen 22 also passed. Rather more than half the candidates had failed to pass once before, and 9 ladies and 17 gentlemen were again unsuccessful. In their notes the examiners state that among the various subjects dispensing was one of the most unsatisfactory; only very few of the candidates succeeded in obtaining the full number of marks, and there was a very general want of care and neatness in this department. The knowledge of materia medica was somewhat more satisfactory, though not above the average, while all the successful candidates obtained a fair position in acquaintance with the current and old systems of medical weights and measures. The knowledge of Latin among the candidates was exceedingly unsatisfactory, but in chemistry the average standard was very good indeed, most of the candidates being able to give an intelligent explanation of the reactions occurring in the compounding of medicines. Natural history was also an exceedingly satisfactory department, and the general knowledge of the candidates was good. No charge is made for examining, and the successful candidates after taking an oath prescribed by law, obtain a governmental certificate.

PIMPLES.—One part of boracic acid to 100 parts of rose-water makes an excellent face wash, pimples and other disfigurements being removed under its use.

Pharmaceutical Society of Great Britain.

COUNCIL MEETING.

THE Council commenced business on Wednesday at 11.25, all members being present, except the Vice-President (Mr. Alexander Bottle, of Dover), and Mr. Watt, of Had-dington, N.B. After the minutes had been read the President explained that both these gentlemen had colds and could not risk travelling. It was the first time Mr. Bottle had been absent through illness during the thirty years or more he had been on the Council. The President regretted that the Council would not have the advantage of Mr. Watt's opinion on some matters which would arise that day. The Council then proceeded to determine by lot who would be

THE RETIRING MEMBERS.

The members who remained in from the last ballot and now retire were:—Messrs. Atkins, Evans, Gostling, Hampson, Harrison, Richardson, and Robbins. The Secretary then drew numbered balls from the bag in the usual way, the result being that Messrs. Leigh, Abraham, Carteighe, Hills, Schacht, Greenish, and Martin were balloted out in that order, while Messrs. Allen, Bottle, Cross, Martindale, Newsholme, Southall, and Watt will retain office for another year. When the President had read the list of

ELECTIONS AND RESTORATIONS OF MEMBERS, ETC.

Mr. SCHACHT, asked why certain gentlemen fell away, to which the President replied, that it was because they omitted to pay their subscriptions for a year or so. Do they pay a fine? asked Mr. Martindale. "Yes," was the reply, "half-a-year's subscription."

THE REGISTRAR SUBMITTED HIS REPORT

for the year 1889, which showed that in that year the number of life members was 208, being a decrease of 3; of subscribing members, 1459 Pharmaceutical Chemists, being a decrease of 14; 608 Chemists and Druggists, representing a decrease of 33; 1226 associates in business, showing a falling off of 55 in that class; 920 Associates not in business, as compared with 941 in the previous year; and 908 apprentices, as compared with 1023, the total strength of the Society, being 5329. It will thus be seen that during the past year the Society did not improve in any one of the classes of its adherents, the total decrease being 241.

At the same time the analysis of examinations for 1889 was submitted, which showed 1,351 Preliminary candidates, of whom 659 passed, the failures thus amounting to 52.22 per cent. In the same period 62 certificates were accepted in lieu of the Preliminary examination. The Board of Examiners for England and Wales in the course of the year examined 129 Major candidates, 76 of whom passed, and 53, or 41.08 per cent., failed; 793 Minor candidates, 480 (60.53) of whom failed; and 2 candidates for the modified, both of whom failed. The Board in Scotland examined 9 Major candidates, 6 of whom failed; 220 Minor candidates, 94 (42.72) of whom failed; and 3 Modified candidates, all of whom passed. The following is the condition of the registers of pharmaceutical chemists and chemists and druggists for 1889:—

<i>Additions during the year.</i>		<i>Erasures during the year.</i>	
By examination.. ..	442	Deaths:—	
Persons in business before		Notices from Registrars..	152
August 1, 1883	3	Other sources	46
Persons restored	25	Erased at the request of regis-	
		tered persons themselves ..	4
		Increase of numbers on the	
		Register	268
	470		470
Number of pharmaceutical chemists on the Register,			
December 31, 1889.. ..			2,183
Number of chemists and druggists			11,894
			14,080

FINANCE.

THE report of the finance committee showed that, with what remained from last month, the committee on the

previous day had to deal with January receipts amounting to 2,456*l.* on the general fund account, derived from fees and interest on investments. They recommended for payment sums amounting to 1,535*l.*, these including the ordinary payments to officers and accounts which come up periodically. The most important items in the report were a recommendation to pay the contractor of the new buildings the sum of 1,000*l.* during this month if necessary, and to sell out 4,500*l.* of stock. In the course of his remarks in moving the adoption of the report, the president mentioned that the stocks would only be sold out as required, and when the treasurer saw that this could be done advantageously. He also stated that the item of 222*l.* 13*s.* for fire insurance was six years' premiums for seven years. The council had got a reduction of 10*l.* a year by putting a hydrant on the premises. The solicitor's bill for 295*l.* was for a period of six months, and in reply to Mr. Richardson the president explained that in that time there had been an unusually large number of cases of prosecution under the Pharmacy Act.

Mr. Evans asked how much had been spent on account of the new building.

The President said, 3,000*l.*, and another 4,500*l.* would be required.

Mr. Evans further asked, was it intended to make the facings of the new building and the old building alike? If so, did the sum include the expense of the alteration of No. 17?

The President replied in the negative, chaffingly remarking that, as Mr. Evans had just returned from an artistic quarter, he might be able to give the Building Committee some novel art notions.

BENEVOLENT FUND.

The report of the committee was made privately. There was only one application for relief, and 5*l.* was granted.

Mr. ROBBINS, in moving the adoption of the report, took advantage of this fact, contrasting it with the unusual demands in January, when 80*l.* were voted; the chairman of the committee closely missed getting the customary pair of white gloves. The committee did not go into the question of subscribing to some orphan institutions, thinking it better to wait until Mr. Bottle attended. He hoped that the experience of this week would often be repeated, for the demands upon the funds were so many that there was a risk that they would not be able to do all that they wished to.

THE PRESIDENT said that, for fear the remarks of the treasurer should lead to any misconception, it would be right to point out that the incident of a smaller number of applicants would probably disappear in the course of the next few months. He hoped it would not be implied that they were less desirous to relieve than to receive. The point was that the fund was not so large as to enable them to give so great relief as they thought was necessary for persons of education—their old brethren in the craft. After all, what was a beggarly 5*l.*—what sort of a sum was that to give (hear, hear)? What they wanted to do was to give 25*l.*, or even 50*l.*, to those who were deserving and who were in need.

Mr. HAMPSON also remarked that while there were sufficient funds for the usual cases, what they really wanted to do was to give more than they did. The circumstance of to-day, he felt, was merely an accident.

THE PRESIDENT also read a letter from Mr. G. S. Woolley, of Manchester, calling attention to the application of Thomas Ernest Taylor, aged 9, of Manchester, for admission to the Commercial Travellers School. Taylor's father had been a chemist, and was well known as a traveller in the North of England. The President hoped that those in the trade who had votes would send them to Mr. Woolley, or any others who received proxies.

LIBRARY ETC. COMMITTEE.

The librarian had submitted his monthly report to this committee. So had the curator and the school staff. The committee had considered the application of the Midland Counties Chemists' Association for a grant, but as the association had not complied with the regulations under which grants are made, the committee did not see its way to recommend compliance with the request.

THE PRESIDENT stated that the Birmingham Chemists

appeared to be labouring under a misapprehension. They wished a grant for their library and museum, but the regulations laid it down clearly that grants were only to be made to associations who were engaged in promoting education by means of schools, and as there was, unfortunately, no school in connection with the association, the committee had only the one conclusion to come to.

Mr. SOUTHALL said that it was evident his local friends could not get what they wanted, but he hoped that they would be in a position at some future time to get a more favourable response.

Mr. SCHACHT said he was not aware that grants were only to be given to associations which had schools of pharmacy. As a matter of fact, the Bristol Association had got a grant when it had no school.

The PRESIDENT said it was quite clear by the regulations that grants were to be made to provincial schools of pharmacy, indeed, the regulations were so headed. He thought Mr. Schacht referred to a grant made before these regulations came out.

A tolerably long conversation ensued upon those points, in which the whole matter was fully gone into. Thus Mr. SOUTHALL pointed out that Birmingham had a grant twenty-five years ago. Mr. HAMPSON said if Birmingham would only start a school they would get a grant to help the library for the students. Mr. RICHARDSON put in a strong plea for provincial associations with schools, arguing that any method of education which was efficient should have the support of the Society. Mr. LEIGH appealed for the loan of materia medica specimens for chemists in small towns who took an interest in educating the young men around them. Mr. MARTIN made a few comments upon the Newcastle School, and called the attention of the president to the fact that the discussion [conversation rather] was wandering somewhat from the matter before the meeting. Nevertheless, Mr. ALLEN managed to get in a few sentences of criticism on Mr. Leigh's comments, and maintained that the council was not illiberal in its action in lending specimens. Mr. SOUTHALL, again speaking, said that Birmingham had good classes in chemistry and botany at Mason's College to which the local chemists subscribed; and as by this time the feeling had been created that the council would assist any kind of education, Mr. EVANS took the opportunity of calling the attention of the council to the fact that the Technical Instruction Act, a most important measure, was likely to create a large number of new centres of technical education; even Llanelli, the town from which he came, was going in for technical laboratories, and they might take advantage of the Society's liberality if they were going to be so free. This remark created the necessary laugh, ensured the commendation of the president, and brought an end to the discussion.

MEDICATED WINES.

Amongst the things which the law and parliamentary committee had to consider was a correspondence and interviews which the President had had with the Inland Revenue Department, regarding the sale of medicated wines by Chemists. He had been informed by the department that they did not interfere with the sale of Pepsin Wine, containing 320 grains of pepsin, and 2 drachms of hydrochloric acid to the pint, nor did they interfere with the sale of Coca Wine, containing half a grain of Cocaine in each fluid ounce. The department was not disposed to grant special licences to chemists for the sale of medicated wines, as such licences would raise considerable difficulty, and there does not, in the opinion of the department, appear to be pressing necessity for them. The committee recommended that a copy of the correspondence should be sent to the executive of the North British Branch. The patent medicine question, which had been definitely brought before the Council by the Newcastle-on-Tyne and Exeter chemists, was delayed for further consideration. The other matter which the committee had under consideration was

THE DRAFT PHARMACY BILL.

1. In this Act—

The term Pharmacy Acts shall mean the Pharmacy Act, 1852; the Pharmacy Act, 1868; and the Pharmacy Act (1868) Amendment Act, 1869.

The term Pharmaceutical Chemist shall mean a person

registered under that title under the provisions of the Pharmacy Act, 1852.

The term Chemist and Druggist shall mean a person registered under that title under the provisions of the Pharmacy Act, 1868.

2. The powers of the Pharmacy Acts with respect to examinations required for obtaining certificates of qualification under the said Acts, or either of them, shall be extended so as to allow of the division of the said examinations into preliminary and other parts of the same; also to allow of or require periods of time and courses of instruction between any of the said parts, and to require that persons presenting themselves for the final part of an examination shall have deposited with the Registrar under the said Acts certificates of their having duly attended courses of instruction in chemistry, botany, and materia medica, and having for not less than three years in the whole served in the open shops of Pharmaceutical Chemists or Chemists and Druggists or in public hospitals or dispensaries as apprentices or pupils of persons qualified in accordance with the law of the country in which they are carrying on business to practise pharmacy in that country.

3. It shall be lawful for the Pharmaceutical Society of Great Britain from time to time by by-laws, duly confirmed by the Privy Council, to regulate the said division of examinations and also the said periods of time and study between any of the said parts; also to allow and provide for and to regulate the reception of certificates issued by other examining bodies in lieu of or so as to satisfy the examiners in lieu of the preliminary part of any examination; also to provide for and to regulate the courses of instruction in chemistry, botany, and materia medica, to be duly attended as aforesaid; also to provide for and to regulate the forms of certificates to be for any purpose of this Act deposited with the said Registrar; and also to provide for and to regulate the notices to be given and fees to be paid by persons intending to present themselves for examination in any part of an examination or desiring any registration under the said Acts or either of them.

4. Sections 18, 19, and 20 of the Pharmacy Act, 1868, are hereby repealed.

5. Every person who has obtained or who shall obtain registration as a chemist and druggist, and being in business on his own account, shall be eligible to be elected a member of the Pharmaceutical Society of Great Britain according to the by-laws thereof, but no person shall in right of membership acquired pursuant to this clause be placed on the Register of Pharmaceutical Chemists, and the Council of the said Society shall not at any time contain more than ten members who are not on the Register of Pharmaceutical Chemists.

6. It shall be unlawful for any person to compound or to keep open shop for compounding medical prescriptions, unless he is a pharmaceutical chemist or chemist and druggist, or a medical practitioner entitled to and acting within the exemptions concerning certain medical practitioners made by the Pharmacy Acts, or entitled to and acting within the exemption concerning certain executors, administrators, and trustees, made by section 16 of the Pharmacy Act, 1868. Provided nevertheless that nothing in this section contained shall extend to or interfere with any person registered in accordance with the provisions of the Veterinary Surgeons Act, 1881, or holding a certificate in veterinary surgery from the Highland and Agricultural Society in Scotland, in dispensing medicines for animals under his care.

7. Every person acting in contravention of the preceding section, numbered 6, shall, for each contravention, be liable to pay a penalty of 5*l.*, and the said penalties of 5*l.* may be sued for and recovered in the manner provided by the Pharmacy Act, 1852, for the recovery of penalties under that Act, and all and every sum and sums of money which shall arise from any penalties so recovered for offences incurred under this Act, or under the Pharmacy Act, 1852, or under section 15 of the Pharmacy Act, 1868, shall be paid to the treasurer of the Pharmaceutical Society of Great Britain, and shall by him be applied to the purposes of the said Acts, and this Act, or either of them. And in any action or proceeding for the recovery of any penalty directed to be sued for by the registrar of the Society, in the name and by the

authority of the Council of the said Society, the name of the said Society alone may be used, and it shall not be necessary to give evidence of the appointment of the said registrar, or of the authority of the said Council.

8. This Act shall not extend to Ireland.

9. This Act may be cited for all purposes as the Pharmacy Acts Amendment Act, 1890, and shall be construed as one with the Pharmacy Act, 1852, the Pharmacy Act, 1868, and the Pharmacy Act (1868) Amendment Act, 1869, and shall come into operation on the first day of January, one thousand eight hundred and ninety-one, but no by-law for the purposes authorised by sections 1 and 2 of this Act shall come into operation prior to the first day of January, one thousand eight hundred and ninety-four.

Mr. SCHACHT asked when the minutes of the Committee were read if it was not usual to insert a distinct motion which was duly put, seconded, and voted upon in committee.

The PRESIDENT said it was not usual.

Mr. SCHACHT then said he would like a note made of a motion which he had put on the previous evening, otherwise he would have to bring it up again that day. He merely wished a record of the fact made, and it was for the Council to say whether that would be done in the minutes of the committee, or whether he would mention it publicly that day.

A lengthy conversation ensued about this, the Council evidently wishing to avoid Mr. Schacht's public explanation, while they also desired to avoid making any note in the minutes for fear of establishing a precedent. Ultimately it was decided to face anything which Mr. Schacht might have to say publicly. At that moment they seemed impatient for

THE PRESIDENT'S VIEWS ON THE BILL.

The PRESIDENT, in moving the adoption of the reports, stated that the patent-medicine question had been further postponed, and would be dealt with at a future meeting. With regard to the sale of medicated wines the question was fairly well met by the letter which had been read from the Government authorities. He was justified in saying that the conclusion they had arrived at was correct. He should be very sorry to see the pharmacists of this country converted into the class of drug sellers, of which there were many in the United States—namely, sellers of "medicated" wines and spirits. The committee had further to consider the resolution, which was moved by Mr. Hampson in November last, that steps be taken to draft a pharmacy Bill embodying certain additions, if the committee thought it expedient, over and above what had been placed in the Curriculum Bill during the last three years. As the result of the committee's deliberations a draft Bill was laid on the table that day. The Bill was to empower them not only to impose conditions of education, but above all to divide the examinations. If at the present moment they had the power to divide the Minor examination it would be a very important thing. It was the very essence of their scheme that the Preliminary examination should be passed early in life, before the student entered the trade. It would be far better to allow, say, an apprentice, in the case of the technical examinations, to pass an examination during his apprenticeship, and then take him, say, on three subjects at the end of his time, which would qualify him. The next clause was with reference to members of the Society. There were three classes of men at present engaged in the business, who were members of the Society—viz., pharmaceutical chemists, chemists and druggists who were registered by being in business before 1868, and those who had passed the Minor examination and were registered since 1868. The proposition was that in future, if they were so fortunate as to get Parliament to listen to their proposition, all those engaged in the great commonwealth of pharmacy should join hands inside the Society. (Hear, hear.) No question of accident, which very often prevented a man going up for the Major, should prevent him becoming a full member of the Society. It was proposed, therefore, that every person who passed the Minor examination after a given day on going into business should be eligible to become a member of the Society. They did not propose that a man as soon as he had passed the Minor examination should be eligible, because

they found that a large number of the young men much preferred to be ordinary associates for a period, and it would inevitably cut out that intermediate grade of associate, which was extremely useful, especially to a young man who had passed the Minor examination early. It was a distinct gain to the Society that he should be attached to it as an ordinary associate, and it would be a pity to alter the conditions under which he was so attached. The moment he went into business he could become a member, and have all the privileges of membership. Another restriction that was made by the Act of 1868 was that the chemists and druggists could only nominate seven members to sit on the Council of the Society. Now it was proposed to repeal that clause, and to allow it to stand that not more than half the members of the Council shall belong to the class of persons who were registered as chemists and druggists. There had been propositions as to abolishing the title of chemist and druggist, but they thought that would be a very difficult thing to do. It was proposed by the clause under notice to perpetuate the two classes of registered persons, and a chemist and druggist could become a member of the society with the same privileges as any other member. Then there was a further provision in the Bill that only persons who were registered should be entitled to compound and to keep open shop for

THE COMPOUNDING OF MEDICAL PRESCRIPTIONS.

A clause to that effect was in the Irish Act, and it did not seem to him an unfair thing to ask it for theirs. The committee thought in this matter they must proceed with great caution, and he had some doubts as to the effect of even this so-called trade or semi-professional matter being joined with a matter which affected education and examination only, and hoped it might not prove an impediment or a block to the Bill. It was very easy to draft a Bill, and to discuss it in that Council, and very easy for members to think it was law, but they had to go to the House of Commons and to persuade members of that House that they were asking for something reasonable, and in the public interest. They had also to satisfy the Government department which took up the matter that it was in the interests of the public, and get them to approve it, for no member of Parliament would take a Bill in hand unless the Government department which was in touch with it distinctly approved of every part of the Bill. They should be content with modest slices of legislation which were distinctly effectual to the public and not unsatisfactory to themselves. The Bill did not contain a provision for restricting the sale of poisonous patent medicines to registered persons—he wished it were possible. He thought it a pity that the Government did not view that matter in the light they did. The Government had informed them that they did not think it necessary to place poisonous patent medicines within the purview of the Pharmacy Bill, and that all they are concerned about was the regulations that it was necessary to have as to labelling. With that in view, they had distinctly said they would not accept suggestions, and had refused the Bill which the Council had drafted some years ago. Similarly they proposed, six years ago, to deal with

CORPORATIONS AND BOGUS COMPANIES.

Since then he had been entrusted by the Council with the prosecution of some who had been concerned in this trade, and knew what was going on. They agreed it might be perfectly right for associations to be mutual and dispense among themselves, but when they saw in a great town in the Midlands a man who was no better than a huckster keeping a chemist and druggist's shop, and selling and dispensing medicines and poisons, they were astonished, and cautioned him, and he promised to refrain in the future; but he immediately formed himself into a company with his family, and proceeded to dispense and compound the poisons they cautioned him about. The Council very properly proceeded against the individual, and he had to pay 25*l.* as a penalty. In the circumstances some might be excused who wondered where the sympathy for such individuals came in. After referring to the difficulties the committee had had in drafting the bill, the president appealed to the council to be ehary about amendments that might make them the laughing-stock of the intelligent people they must go before in presenting their Bill. Mr. Watt had sent an amendment on the company question, and

it had received the careful consideration of the committee, but they were not able to recommend that his clause should be added to the Bill. This was not a new subject to him, for, from the very outset, when in 1868 stores were opened in London for the sale of poisons and medicines, he had been kept well posted in regard to all the phases of this company question. He knew exactly the position they were in as regards the Pharmacy Act; he knew what the intentions were of the Limited Liability Companies Act, and how trade was thereby affected, and he also knew from close contact with legislators that anything which they might attempt to repress the trading of these bodies, for the benefit of the craft would simply not be listened to in the House of Commons. Even such a man as the present Lord Chancellor, who was in sympathy with them, told them in plain language that they had no hope in the House of Commons in the present state of public opinion. He asked them, therefore, was it wise, was it politic, was it consistent, with the reputation of that Society that it should go to Parliament to ask for such provisions? It was not desirable, and the committee submitted it was not. He then went on to say there was nothing in the Bill detrimental to public interests, and nothing which was claimed for the Pharmaceutical Society as a privilege which was contrary to the public interest. He therefore proposed the adoption of the report.

The conclusion of the President's speech was marked by general clapping of hands, which was renewed when

Mr. HAMPSON rose to second the motion. He said, after complimenting the President, that there was considerable difficulty in passing any measure at all. Even Government Bills were difficult to pass, and any Bill which was not a Government one, and which, as in this case, did not incorporate demands made directly by the outside public, was very hard to get through the House of Commons. He maintained, however, that their views were distinctly in the public interest. Speaking on the 5th clause, he said that he hoped it would add largely to the strength of the Society. It was a most important proposal in view of the fact that to support all legislative measures it was necessary to have with them the opinion of the members, and the more extensively the members represented the trade, the greater would that support be. In every respect he thought the proposal was just, democratic, and would be received with something like joy by the trade. The 6th clause was of equal importance. It was an effort to place the dispensing of medicines on the same footing and in the same position as the sale of poisons. The latter was in one sense very unimportant, whereas correct and accurate dispensing was a most important thing to the public, for it brought to a focus all the qualifications which the chemist by education and training had acquired. He trusted that this proposal would receive the support of medical men, and that the council would as one voice give the Bill as it stood their support. It would be most deplorable if any sound of division were raised up that day, for it would bring opposition from the outside, and would unquestionably imperil the fate of the Bill.

Mr. SCHACHT asked what was meant in clause 6 by "any person"; was person the individual who worked the pestle and mortar, that was the assistant, or the person who sold the medicine? He should like to have a clear definition of that.

The PRESIDENT stated that the wording of the clause was the same as in an existing Act.

Mr. SCHACHT was not satisfied with this explanation. He wished to know definitely what the intentions of the framers of the Bill were. What did they mean by "person"? Would the clause make apprentices liable to prosecution?

Still the President declined to be drawn, and Mr. SCHACHT having with emphasis repeated his question, Mr. CARTEIGHE now replied that he would rather not give an opinion. It was not for him to do so, and it would only lead to altercation. The clause was the same as was in the Irish Pharmaceutical Act.

AGAINST BOGUS COMPANIES.

Mr. A. C. ABRAHAM was the next speaker. At the outset he protested against the view advanced by Mr. Hampson, that the Council should take the Bill as it stood, and that those who did not do so and submitted amendments were obstructors. That view was quite uncalled for. (Hear, hear.)

Every member had the right to express his views. He desired to move the following amendment to clause 6:—

Line 1. After word "person" to insert words "or persons or company."

Line 3. After word "he" insert "or they," also omit "a," and for "chemist" substitute "chemists."

Line 4. For "druggist" read "druggists."

End of clause to add words, "Nor to *bond-fide* co-operative societies supplying their own members by the hands of duly qualified persons."

[The effect of this clause would be to put down bogus companies, and to bring others, such as genuine co-operative stores, under control.]

Mr. ABRAHAM, continuing, said that there had been a short discussion on this proposition in committee, and although it had been defeated, he thought it right that he should bring the amendment before the Council. The sixth clause as it stood was useless, but with his amendments it would be made agreeable to the craft, and it would make the Pharmacy Act a valuable Act.

Mr. LEIGH was proceeding to speak when he was assailed with the request—Was he to second Mr. Abraham's amendment? He said he liked the Bill as it stood, but thought it did not go far enough. What the trade at present suffered from was bogus companies, and it was that relief which had impelled him to support Mr. Abraham in committee. He did so again, but acknowledged the weight of Mr. Carteighe's arguments, and did not think after that speech the Council would adopt Mr. Abraham's amendments.

The PRESIDENT having explained what the effect of the amendments would be,

Mr. HARRISON took up the cudgels in Mr. Abraham's defence. He said that he had given this matter much consideration, and thought that as they could not put down co-operation, the next best thing was to recognise and regulate it. It was quite impossible to pursue a policy of repression, as that would interfere too greatly with a popular method of trading. That being so, he was of the opinion that what the Pharmaceutical Society should do was to adopt some means of regulating the drug trade carried on by companies. He gave the general character of the Bill his hearty support, being content to take it for the little good it contained, and looking to the future for more. The Society represented a great craft, and would if the Bill passed be a stronger body with fuller political weight. It was undoubtedly desirable, as Mr. Hampson said, that the Council should be unanimous about this Bill, but they could only become so by thrashing out their differences. (Hear, hear, from the President.) That was the best way of arriving at unanimity, not by keeping their mouths shut and accepting any Bill which might be put before them. So acting, they could, after their differences were settled, give the Bill their best support.

Mr. GOSTLING pointed out that the House of Lords had given a clear definition of how the sale of poisons should be effected, and it was clear from that that the personal supervision of qualified persons protected apprentices.

Mr. ALLEN asked if Mr. Harrison agreed with the term "bogus company," and pointed out that it would be easy for any such company to adopt the ticket system and the co-operation principle.

Mr. HARRISON, however, adopted the President's plan, by saying that definition would have to come by litigation if necessary. The line between limited companies and co-operative stores was a fine one, and it would be for a court of law to decide what was bogus and what was not.

MR. MARTIN ADVOCATES SECRECY.

Mr. MARTIN, having referred to Mr. Harrison's views, stated that Mr. Abraham was not correct in saying that this subject had not been fully discussed by the Council. It had been discussed in committee for hours, and hours, and hours. (Applause.) Moreover, he maintained that it was not in the public interest, nor in the interests of the Pharmaceutical Society, nor in the interests of chemists and druggists, to discuss this matter publicly. It would do an infinite amount of harm to state at that table what they knew and what they thought regarding the Bill.

Mr. ATKINS thought that Mr. Harrison's idea of regulation was Utopian. It was against all that the Society had ever

done. It was against their schemes of education, and against all the aims which they had made to improve the condition of pharmacists, to recognise companies. Apart from that, it would be decidedly bad policy, for perhaps the co-operative idea might only be a passing thing. Chemists in the country suffered from many things, but not from combination. He did not think it wise to weight the purely educational Bill by matter which would give rise to dissent; but he was glad that they were reducing the differences in the standings within the Society, and glad also that they were not to reduce the value of the title "pharmaceutical chemist" by conferring it upon all who passed the Minor. There was a difference of opinion on that outside, and as they must, in order to pass the Bill, have a very large amount of support from their own body, he trusted the members would accept the Bill in its entirety.

A DEMOCRATIC COUNCIL.

Mr. EVANS said that if the Council was a representative and democratic body, as Mr. Hampson said, then their duty was to find out what the trade wanted. But they did not do that. They did not give the trade what was wanted. If they were a democratic body they ought to create enthusiasm; but that they did not do. He knew that something was required in regard to the company matter, and for that reason he would support Mr. Abraham. He asked if it would not be better to state the term which should elapse between the two examinations.

The PRESIDENT explained that the Bill was only an enabling one. Details would be settled by by-law.

Mr. EVANS also wanted to get the same definition as Mr. Schacht had vainly tried to get. He opposed the 5th clause because it was not democratic enough. Why should they have only ten chemists and druggists on the Council? What had pharmaceutical chemists to fear from the lower grade, and why should they be afraid of them? He thought there was nothing to fear—no reason why both classes should not be placed on an equal footing; and he went the length of advocating equal rights for associates not in business. He would make the clause such that every person who passed the Minor should be eligible to become a member of the Society at once. Moreover, he would make the 8th clause read, "This Act shall not extend to Ireland or Wales." (Laughter.)

Mr. CROSS was opposed to regulating a thing which the Council could not recognise, and would vote against Mr. Abraham's motion. The Society had all along gone on the principle that a qualified assistant could not take the place of a qualified master. He maintained, moreover, that the reason why they had been unable to excite the enthusiasm of the trade was because the Council had found it impossible to get what the trade wanted. He hoped, however, that the President's speech would be read by every chemist on the register, and that the result would be general support of the Bill.

REGULATION DANGEROUS.

Mr. MARTINDALE thought that the danger of the amendment lay in regulating stores; for as soon as they did that the capitalists would at once ask, Why should they not do the same thing as stores? And he also asked, Why not?

Mr. HILLS disapproved altogether of the regulation idea. It would be easy for every bogus company to have a penny, twopenny, or threepenny ticket, and so exclude themselves by thus adopting the co-operative system. He quite believed that it was impossible to repress company trading. Moreover, as long as they allowed branch shops and the shops of deceased chemists to be carried on as they were, they could not go forward with clean hands to demand the repression of companies.

Mr. HAMPSON said the amendment would wreck the Bill, for the simple reason that half the trade would be up against it, because they proposed to license the stores.

Mr. ALLEN said that the original action by the Society was not against stores, but against a bogus company, and he was sorry that Mr. Harrison was willing to show his grocer how to do the trade which he only was entitled to do.

Mr. Abraham was about to reply, saying that he had the right to do so, but the President said he could not as a matter of right, but by courtesy. It appeared, however, that Mr. Abraham did not wish to make a speech, only to

say, in reply to Mr. Martin, that his amendment had not been discussed for hours, but for five minutes the night before.

Mr. MARTIN pointed out that Mr. Abraham was not on the Law and Parliamentary Committee, and did not know what time had been given to the subject by that committee.

The PRESIDENT supported Mr. Martin's point, and remarked, in a sarcastic tone, that of course it was natural that one should have respect and should say something for his own baby. A clause similar to Mr. Abraham's had been discussed by the committee for more than an hour.

Mr. ABRAHAM said it was not the same as his.

The PRESIDENT could not help it if members could not understand the English language, and remarked that he did not come there to be put right by young men.

Mr. ABRAHAM maintained that his words were not the same as the clause which Mr. Carteighe referred to; but the President sarcastically denied this.

A vote was then taken, when only Messrs. Abraham, Evans, Harrison, and Leigh voted for the amendment.

AN ADJOURNMENT

for luncheon was then made, and on resuming Mr. Schacht was voted to the vice-chair, Mr. Robbins having left.

The PRESIDENT said that this would be a convenient time for Mr. Schacht to bring on his amendment. Accordingly

Mr. SCHACHT rose, and said that, speaking generally, his preference would have been for the clauses dealing with education and examination and the 5th clause, for the reason that such a Bill would stand a better chance, and would gain a step in purposes which they all had so much at heart. (Hear, hear.) It was unfortunate, he thought, that anything should have been added, and he was afraid that the beginning of clause 6 would interfere with the unanimity which all desired, as it would invite the opposition of those who lived so largely upon dispensing of physicians' prescriptions. He was desirous of adding something to it which would screen those who were called upon by registered persons to dispense medicines. It would, in short, interfere very seriously with the work of chemists and druggists. He did not at all wish it to be thought that in thus expressing himself he was hostile to the Bill. Following Mr. Carteighe's statement that there was no use in attempting to attempt that which was impossible, he felt that the President's whole speech was decidedly in opposition to the Bill as it stood. He also thought that Mr. Watt's views were impossible to be legislated upon; but, irrespective of all that, he returned to his original point, viz., who was the compounder referred to in the Bill? and if it was the person who mixed the medicine under the supervision or direction of his master, a registered man, he maintained that the servant should be protected, and that words should be placed in the Bill such as "or be directly employed by a registered chemist," so that young men should be protected from prosecution.

At this point conversation and hilarity became somewhat free, and several rather sarcastic remarks were made regarding what Mr. Schacht was saying about the difference between "qualified" and "registered" persons, which resulted in Mr. Schacht saying that he was personally affronted by one remark which fell from Mr. Hampson. He then proceeded to say that there were two classes of unregistered persons employed in pharmacies—apprentices, who paid to be taught their business, and those who, having passed the apprenticeship stage, were employed for payment before they reached the age at which they could qualify. He had employed such persons, and it was in the interests of these only that he now wished to add such words to clause 6 as would define what was meant by "person."

Mr. HAMPSON disclaimed any intention of giving Mr. Schacht personal affront, and regretted that he had thought so.

Mr. HARRISON formally seconded the amendment, but did not say he would support it. A conversation then ensued between Mr. Evans and the President as to how the clause would apply to a chemist who kept only two apprentices and an unqualified assistant. The President said his view was that if a qualified person supervised the work the apprentice or assistant would be all right. It was for a court of law to decide that, however. Mr. Evans said that if the same thing was likely to happen under the clause as happened in the Wheeldon case, he would oppose the clause

with all his power, and it would be the duty of every chemist in the country to oppose it.

The amendment was then put to, the meeting, but only Mr. Schacht and Mr. Evans voted for it.

"DIRECT EMPLOYMENT" OR "IMMEDIATE SUPERVISION."

Mr. SCHACHT now said that, as he had been defeated upon the definition of "person" amendment, he would put another, in which the words "immediate supervision" would take its place. On the whole he thought it would be better to use the words "direct employment" instead of "personal supervision." His object was the same—to protect young persons. By all means let them have a qualified person in each branch shop. He did not object to that, although some round the table seemed to hesitate about it. He did not see why—, and was proceeding to speak rather warmly about the branch shop clause when the President called him to order.

Mr. EVANS having repeated his arguments, the amendment was about to be put, when

Mr. RICHARDSON thought that there was not so much wrong about it. Medical men employed unqualified assistants; why should not chemists? It would be a great hardship for chemists if they were prevented from having apprentices and junior assistants. Moreover, if the clause were retrospective, it would be hard on the men of thirty or forty who had not passed their examinations. They must sympathise with them, for it was not an easy thing for men of that age to get through an examination. He did not think the members of the Council would care to face that ordeal now.

Mr. MARTINDALE thought the clause might go as it was.

Mr. MARTIN deplored the public discussion of such subjects. What did they mean by "direct employment"? He knew one case, for example, where an apprentice one week at the trade was left in charge of the shop while his master went to a prayer-meeting. This apprentice was in the direct employment of the registered person, but they could not say it was a safe policy to carry out. He looked upon it that the apprentice was as necessary in the business as the man who cleaned the mortars required in the dispensing. The clause did not affect the position of apprentices so long as their work was properly supervised, and he wished to remind Mr. Richardson that the General Medical Council now threatened to remove from the register of medical practitioners the name of anyone who employed unqualified persons. But again he wished to say the discussion of such subjects as this in public was a most pernicious thing, and did a great deal of harm. Mr. Hampson next expressed the opinion that the amendment would create a new qualification; and Mr. Richardson having modified his previous views, gave place to Mr. Harrison, who remarked that "directly employed" would include persons who kept branch shops 1,000 miles away. Mr. Gostling then related, in a very humorous manner, a condition which he lately experienced in his own business. The three qualified persons in it were laid by with influenza, and none but apprentices were left, so he thought the only thing he could do was to shut up his shop, until an old pupil volunteered his services, and so kept it open. By this time the Council was rather noisy, and Mr. Schacht was endeavouring to further explain his views. He got a poor hearing, however, and we could only gather that he argued that all which had been said about the application of direct employment to branch shops could easily be got rid of by the introduction of the old branch-shop clause into the Bill, so that these would come under the charge of registered men. The vote was then taken, when only Messrs. Abraham, Schacht, and Evans supported the amendment.

Mr. ALLEN wished to put the amendment in the first form which Mr. Schacht put it, but on the appeal of his colleagues he changed his mind about that.

THE CONSTITUTION OF THE COUNCIL.

Mr. EVANS moved an amendment to clause 5, deleting the last sentence of the clause referring to the number of chemists and druggists on the register.

Mr. Martindale signified his willingness to second the motion *pro forma*; so did Mr. Atkins, but there was a general appeal to them not to do so, and the amendment was accordingly not put. This brought the amendments to an end, and the Council then took up the Bill as a whole.

Mr. Greenish expressed his entire approval of it, and Mr. Martindale was also about to speak, when the President asked him not to, and said that he had intended to speak, but he thought enough had been said, so he would put the motion at once. This was done, and it was carried *nem. con.*, Messrs. Abraham, Evans, and Schacht not voting.

REPORT OF THE RESEARCH COMMITTEE.

The committee reported that nine persons had been working in the research laboratory, and five papers by three of the workers were the direct result, while outside investigators contributed four communications to the Society on allied subjects. The committee expressed its satisfaction with the work, calling attention to the fact that the researches of the year were in a department different from that of the preceding year. The work in 1889, in fact, was on the lines previously followed by Pereira, Fownes, and Hanbury. The committee devoted two paragraphs of the report to some references in regard to the peculiar position of the laboratory for conducting researches on plant constituents, and the like, in a more thorough manner than private individuals could do, reasserting the influence of the research laboratory, and stating that some part of the work yet remained to be published, particularly that on the composition of Sir Joseph Lister's double cyanide of mercury and zinc. The report was signed by Michael Carteighe, president; Alexander Bottle, vice-president; Thomas Greenish, G. F. Schacht, members of the Council; Michael Foster, E. Frankland, T. Lauder Brunton, and Charles Ekin, additional members of the committee.

The PRESIDENT, in moving the adoption of the report, hinted that the research laboratory might have something to do with the work for the addendum to the B.P. He spoke generally about the work in the laboratory, and said that it was having a splendid influence upon the young men who were engaged in it, giving them a training which would be of great value to themselves personally, and ultimately to pharmacy as a whole.

Some conversation ensued as to the advisability of stating who were the nine persons engaged in the laboratory, but nothing definite came out of it.

B.P. ADDENDUM.

It was agreed to appoint as a committee to co-operate with the Pharmacopœia Committee of the General Medical Council the following gentlemen, viz.:—The President, Vice-president, Dr. Inglis Clark, Mr. Charles Ekin, Mr. Samuel Gale, Mr. H. G. Greenish, Mr. N. H. Martin, Mr. W. Martindale, and Mr. Charles Umney.

The SECRETARY then submitted the reports of the January examination, which are given below.

This was all the public business.

THE BOARD OF EXAMINERS FOR SCOTLAND

met at 36 York Place, Edinburgh, on January 21, 22, 23, 29, and 30, for the purpose of conducting the Major and Minor examinations. The following gentlemen were successful:—

MAJOR EXAMINATION.

Mr. George Cowie, Aberdeen.

MINOR EXAMINATION.

Akeroyd, Peter Martin, Edinburgh	Leys, Alexander, Edinburgh
Allwood, William S., Mansfield	Marshall, Charles Bushby, Dublin
Brearley, Richard, London	Matthew, Edwin, Edinburgh
Brown, Henry A., Sunderland	Neil, William, Port Glasgow
Brown, James Henry, Sudbury	Newey, Frederick Albert, York
Butchart, Robert, Edinburgh	Parker, James Herbert, Middleton
Carmichael, Matthew, Glasgow	Ragg, Walter James, Edinburgh
Clark, Adam Rankine G., Dublin	Savege, Ernest, Edinburgh
Clarke, Andrew, Bridlington	Sleath, Edmund W., Manchester
Donald, James Jason, Edinburgh	Smith, Robert, St. Helens
Dudgeon, James, Edinburgh	Stewart, Charles, Edinburgh
Ford, James, Montrose	Taylor, Josiah Ellison, Manchester
Freeland, James, Bathgate	Walker, James, Edinburgh
Furness, Walter, Acerrington	Weir, Alexander Sim, Uphall
Honnam, Christopher, Edinburgh	White, Frank, Liverpool
Inglis, Henry, Glasgow	White, Sidney Bowring, Salterton
Jones, Owen, Carnarvon	Williams, David, Edinburgh
Keith, Alfred George, Edinburgh	Wilson, Abel Ernest, Stockport
Ker, William Law, Partick	Young, Andrew, Edinburgh
Lee, John George, Wavertree	

PRELIMINARY EXAMINATION.

A MEETING of the Board of Examiners for England and Wales was held on Tuesday, February 4.

Certificates by approved examining boards were received from the undermentioned in lieu of the Society's examination:—

Brown, Harold, Southport
Carlton, Herbert, Horncastle
Dawney, Charles Benjamin, Bristol
Edwards, John Griffith, Barmouth
Heny, Alfred Warrington, Duffield
Jones, John Harrison, Ruthiu
Plowright, John, Rydo

Scruton, Tom E., New Wortley
Smith, Gilbert, Bayswater
Smith, Thomas A., Radcliffe
Southall, Alfred W., Birmingham
Spoor, Herbert M., Manchester
Sturt, Clifford H., Oakengates

The report of the College of Preeceptors on the examination held on January 14 was received.

Three hundred and forty-four candidates had presented themselves for examination, of whom 167 had failed.

The following 177 passed, and the Registrar was authorised to place their names upon the register of apprentices or students:—

Allan, William, Hull
Allay, Frederick Wilson, Sowerby
Ascroft, Benjamin, Ince
Babbington, John B., Market Rasen
Bacon, Francis Hugh, Bromley
Bailey, Arthur, Preston
Barr, Alexander Steen, Liverpool
Bates, Sydney L., Birmingham
Beale, Horace S., Cambridge
Beedle, L. E., Woston-snpier-Mare
Bendall, E. J., Wells, Somerset
Bennett, F. W. M., North Berwick
Bentley, Thomas, Leek
Bethel, Benjamin, Pendleton
Bishop, John Duval, Stroud
Bisset, Arthur William, Stonehaven
Blackadar, Charles B., Portsmouth
Blunt, Henry R., Birmingham
Botham, James Ernest, Manchester
Bowden, Harold, Patricroft
Branch, George T., Cambridge
Brenner, William, Aberdeen
Bridger, Fred. W., Easthourn
Brittain, Harold, Chesterfield
Broadbank, A. S., Stockton-on-Tees
Broadbent, William H., Ollerton
Broom, George, Treherbert
Bulman, Tom, Carlisle
Burnett, George, Aberdeen
Burns, John, Edinburgh
Burton, George S., Blackburn
Cade, Thomas Tunson, Louth
Cameron, John, Montrose
Carmichael, George S., Edinburgh
Carter, John Howell, Porthleven
Charlton, Thomas D., Houghton-le-Spring
Cheriton, Sidney R., Okehampton
Cole, Arthur, London
Coulthard, Abram, Silloth
Croll, David Watson, Paisley
Dallngwater, Edmund, Louth
Dallow, Charles E., Stourbridge
Danziger, Henry, Manchester
Darney, William E., Stanley
Davies, David Arthur, Llandoverly
Davies, Thomas Edgar, Abergelc
Dent, George, Middlesborough
Dent, John Wallace, Swaffham
Dickens, Thomas John, Earlestown
Dooston, John A. M., Tottenham
Douthwaite, Douglas G., Ruabon
Driffill, Frederick W., Leicester
Dyson, Herbert, Derby
Eaton, Tom Wilcox, Reading
Edwards, Thomas C., Corwen
Evans, James, St. Clears
Fadelle, Robert Rainy, London
Finney, Henry William, London
Fore, Walter Thomas, Birkenhead
Fortune, Ernest, Harrogate
France, William Henry, Rotherham

Francis, Thomas, Llandilo
Galloway, Alexander S., Hanley
Gaul, Ernest George, London
Gellatly, Walter Davidson, Perth
Gill, James Alexander, Elgin
Gorton, Albert George, London
Green, George Winfield, Tadcaster
Hamilton, George W., Stirling
Harper, Jas. W., Barrow-in-Furness
Harris, Abraham, Sheffield
Harrison, Thoms Arthur, Bourne
Hitchon, Charles, Padiham
Horton, William John, Woburn
Howard, Percy Sturton, Ely
Hudson, C. F., Asb-next-Sandwich
Humphreys, Nigel Carr, London
Hutchings, Thomas, Launceston
Irwin, Hubert Aloysius, Watford
James, Alfred Clifton, Porthleven
James, Charles, London
Jarvis, Samuel Horace, Leicester
Johnson, Harrison P., Prestwich
Jones, Harold Emery, Holyhead
Jones, William Henry, London
Jones, William R., Bettws-y-Coed
Kay, Llewellyn, South Shields
Kennedy, William, Hawick
Kerr, Hugh, Dalbeattie
Larcombe, Arthur, Exeter
Latham, Hugh, Kirkcaldy
Lee, Wilson, Wem
Lockwood, Harold S., Stalybridge
Lohar, James, Glasgow
Lucas, Harry, Andover
Mackay, Lionel M., Bridge of Allan
McKenzie, Charles, Inverness
Mackenzie, Thomas, Inverness
Magee, Vincent Arthur, Castle Eden
Malcolm, Robert Martin, Dumfries
Mallahand, William H., Sheffield
Marsh, Albert, Crewkerne
Marsh, Alfred Edward, Luton
Mercer, Alfred, Rochdale
Mitchell, Willie, Halifax
Morris, Harry Barker, Bilston
Morrison, Angus Hugh, Perth
Moss, Sidney John, Coggeshall
Nall, Walter, Rochdale
Nock, Frederick Joseph, Congleton
Olliphant, Andrew Hood, Coleraine
Osborn, Joseph Bishop, Maryport
Patrik, Christopher, Bradford
Peterkin, Henry, Lissiemouth
Pipe, William, Leeds
Price, Price Maurice, Rutbin
Pryor, Sydney H., Cambridge
Rambant, John Ackland, London
Ratcliffe, James E., Acerrington
Richardsoo, James A., Market Rasen
Ridding, Emily Charlotte, London
Roberts, Ethelbert John, Tenby
Roberts, Henry, Morriston

Roberts, William, Denton
Robertson, Daniel, Galashleis
Robertson, David Smart, Carroustie
Robertson, James George, Stirling
Ross, David, London
Rosser, William M., Abergavenny
Rowan, Donald, Oban
Salt, John Gerrard, Derby
Salter, Thomas Lewis, Bradninch
Sampsoo, Edwin, Penzance
Savage, James William, Bradford
Shelley, George, Bilston
Shepherd, Joseph Henry, Derby
Simpson, Richd. Todd, Old Hutton
Sinclair, Arthur, Macduff
Sloan, James, Greenock
Smith, Richard E., St. Leonards
Smith, Walter, Liverpool
Snath, Alfred L., Middlesboro'
Soddy, Francis W., Stonehaven
Spark, Henry Langlands, Forfar
Stafford, Albert E., Nottingham
Stewart, Arabella B., Hamilton
Strachan, John, Edinburgh
Summers, Harold, London
Sutcliffe, Lot B., Tborne
Taylor, Wm. P. A., Blackpool

Temple, Frederick W., Driffeld
Thompson, Edwin B., Birmingham
Thompson, Harry, Oldham
Thompson, James Cook, Truro
Thompson, William, Armathwaite
Tomlinson, Nehemiah, Buruley
Varley, Albert W., Chesterfield
Vernon, George Henry, Silverdale
Walters, Robert T. F., Llanhoidy
Watson, Herbert S., Towcester
Weight, Samuel T. F., London
Whaley, C. E., Newcastle-on-Tyne
White, Walter Michael, Canterbury
Wild, George A., Sheffield
Wildman, Harry George, Feltham
Wilkinson, John Horsley, Colne
Wilkinson, J., Melton Mowbray
Williams, Owen R., Port Dinorwic
Williams, Thomas, Aberayron
Wilson, James Monro, Anchlill
Wilson, J. A., Newcastle-on-Tyne
Wilson, William B., Carlisle
Wood, Charles, Stourbridge
Woodland, Walter H., Leicester
Worthington, James, Manchester
Wright, Lydia P., Sutton Coldfield
Young, Andrew, Perth

EXTRACTS FROM THE REGISTER OF DEEDS OF ARRANGEMENT.

The following deeds of arrangement with creditors have been filed at the Bills of Sale Office, under the provisions of the Deeds of Arrangement Act, 1887. Some of these deeds are for the purpose of carrying out compositions with creditors (and such are specified below), but the great majority of them are "assignments" in the ordinary form, to a trustee or trustees, for the benefit of creditors. The Act referred to expressly provides that registration shall not give validity to any deed which is an act of bankruptcy, and there is no provision, in the Act, making any of these arrangements binding upon dissenting creditors.

Chippindale, James, 92 Leeds Road, Windhill, general botanic druggist. Trustee: John Butterfield, Bradford, accountant. Date, Jan. 27, 1890; filed, Jan. 30, 1890; unsecured liabilities, 144l. 18s. 4d.; estimated net assets, 188l. 12s. 11d.

	£	s.	d.
Ayrton & Saunders, Liverpool	11	14	9
Hirst, Brook & Hirst, Leeds	27	9	8
Holmes, John, Windhill	30	0	0
Thornton, Henry, Bradford	33	19	6

Flynn, Edmund Francis, St. Stephen's Square, Bayswater, doctor of medicine. Date, Jan. 28, 1890; filed, Jan. 31, 1890; unsecured liabilities, 242l. 5s. 5d.; estimated net assets, 104l.; composition of 6s. 8d. in the pound, payable forthwith.

	£	s.	d.
Ferris & Co., Bristol	16	9	0
Friend, H., Sunderland	16	0	0
Gray, Philip, London	30	3	9
Hewlett & Son, London	30	0	0
Hills' Trust, Sunderland	17	10	0
Lyons & Co., Sunderland	16	10	0
Samners, W. E., Sunderland	11	0	0
Weiss & Co., London	18	0	0

Lemmens, John Charles, 54 Rodoev Street, Liverpool, dentist. Trustee: Andrew Kirkpatrick, 56 Merton Road, Bootle. Date, Jan. 24; filed, Jan. 31; unsecured liabilities, 592l. 10s. 2d.; estimated net assets, 297l. 10s.

	£	s.	d.
Bathgate, —, Liverpool	10	17	0
Cowper, Mrs., Liverpool	20	0	0
Crebbin, Julius Caesar, Bradford	211	16	4
Crebbin, E. W., Liverpool	20	0	0
Jones, George, Liverpool	10	0	0
Kirkpatrick, Andrew, Bootle	92	0	0
Norton George, Liverpool	52	0	0
Parker, Robert P., Chesterfield	64	9	8
Quilliam, W. H., Liverpool	18	0	0
Smith, Charles, Liverpool	10	14	0
Thlorry, Mrs., Liverpool	42	0	0

Legal Reports.

THE PHARMACEUTICAL SOCIETY OF GREAT BRITAIN v. WHEELDON.

THE hearing of this case, on appeal from the decision of the judge at the Wandsworth County Court, came on for hearing on Tuesday before Baron Pollock and Mr. Justice Hawkins, sitting as a divisional court in the Queen's Bench. The county court judge had decided that the defendant had made himself liable to a penalty under the Pharmacy Act of 1868, and this was an appeal from that ruling.

Mr. Finlay, Q.C., who appeared in support of the appeal, stated that the case raised a point of considerable importance, although a short one, under the Pharmacy Act of 1868. The question was—Whether an unqualified assistant of a qualified chemist, who sold poison in a shop, was liable to a penalty under the Act as the seller? That was the exact point. The notes of the said county court judge were as follows:—This action was brought to recover an amount of penalty incurred by the defendant on September 15, 1889, in selling poison, to wit, "strychnine," or a preparation thereof known as "Battle's vermin-killer," contrary to the provision of the Pharmacy Act, 1868. The poison book was produced, and it was admitted that the defendant was in the sole charge of the shop in which the poison was sold. It was further admitted that the defendant sold to a female a packet of "Battle's vermin-killer," that he was not duly registered as a pharmaceutical chemist or as a chemist or druggist, and that the article called "Battle's vermin-killer" contains strychnine, and that strychnine is a poison. George Frederick Burroughs said, "I know 'Battle's vermin-killer'; the contents of it contain strychnine; strychnine is a poison." In cross-examination he stated that he had known death result from the taking of "Battle's vermin-killer." A grain of strychnine was sufficient to kill a person. It was admitted that the employer of the defendant was a properly qualified chemist. The question was—Whether the defendant was liable to a penalty under 31 and 32 Victoria, c. 121, sec. 15? I was of opinion that the words of section 15 were wide enough to embrace this case, and that the defendant was liable to the penalty. I, however, gave the defendant leave to appeal.—Mr. Finlay said he would next call attention to the Act itself. The preamble recited that "Whereas it is expedient for the safety of the public that persons keeping open shop for the retailing, dispensing, or compounding of poisons, and persons known as chemists and druggists should possess a competent practical knowledge of their business, and to the end that for and after the day herein named all persons not already engaged in such business should before commencing such business be duly examined as to their practical knowledge, and that a register should be kept as herein provided; and also the Act passed in the fifteenth and sixteenth years of the reign of her present Majesty should be amended." The 1st section enacted that "from and after the 31st day of December, 1868, it shall be unlawful for any person to sell or keep open shop for retailing, dispensing, or compounding poisons, or to assume or use the title 'chemist and druggist' in any part of Great Britain, unless such person shall be a pharmaceutical chemist or a chemist and druggist within the meaning of this Act, and be registered under this Act, and conform to such regulations as to keeping, dispensing, and selling of such poisons as may from time to time be prescribed by the Pharmaceutical Society with the consent of the Privy Council." Their lordships would see that the material words of that section were "from the 31st December, 1868, it shall be unlawful for any person to sell or keep open shop for retailing, dispensing, or compounding poisons unless such person shall be a pharmaceutical chemist." He submitted that the word "sell" referred to the act of the principal; it was the proprietor of the shop who sold, although it was done by the hand of his assistant. Section 2 defined the articles which were to be deemed poisons, and strychnine was one of them. Section 3 explained who were chemists and druggists within the meaning of the Act; and their lordships would observe that the keeping of open shop referred to in that section

must be the act of the principal; it was clearly not the act of the assistant employed in the shop. The 4th section provided for the registration of apprentices and assistants; the 5th for the registration of chemists and druggists; and sections 6, 7, 8, 9, and 10 for the examination and registration of pharmaceutical chemists. The 11th section was as to the notice being given in the case of the death of one who was on the register. Section 12 related to evidence of qualification to be given before registration; 13, to publication of register; and 14 imposed a penalty for falsification or false representation. The 15th was the section under which these proceedings were taken. It ran thus:—"Any person who shall sell or keep an open shop for the retailing, dispensing, or compounding poisons, or who shall take, use, or exhibit the name or title of chemist and druggist, not being a duly registered pharmaceutical chemist or chemist and druggist, or who shall take, use, or exhibit the name or title pharmaceutical chemist, not being such, or shall fail to conform with any regulation as to the keeping or selling of poisons made in pursuance of this Act, or who shall compound any medicine of the British Pharmacopoeia, shall for every such offence be liable to pay a penalty or sum of 5*l.*, and the same may be sued for, recovered, and dealt with in the manner provided by the Pharmacy Act." The 16th section reserved the rights of certain persons. The 17th section was extremely material. It enacted that "it shall be unlawful to sell any poison, either by wholesale or by retail, unless the box, bottle, vessel, wrapper, or cover in which such poison is contained be distinctly labelled with the name of the article and the word 'poison,' and with the name and address of the seller of the poison; and it shall be unlawful to sell any poison of those which are in the first part of the schedule (A) to this Act, or may hereafter be added thereto under section 2 of this Act, to any person unknown to the seller, unless introduced by some person known to the seller; and on every sale of any such article the seller shall, before delivery, make or cause to be made an entry in a book to be kept for that purpose, stating the date of the sale, the name and address of the purchaser, the name and quantity of the article sold, and the purpose for which it is stated by the purchaser to be required, to which entry the signature of the purchaser and of the person, if any, who introduced him shall be affixed." The penalty was fixed at 5*l.* for the first offence, and 10*l.* for the second and subsequent offences. The section went on to say that "for the purposes of this section the person on whose behalf any sale is made by any apprentice or servant shall be deemed to be the seller." Upon that section he respectfully submitted that it was reasonably clear that the present defendant was not liable for the penalty. He sold acting as assistant to a duly qualified chemist. It was said that the case came within the 15th section, which has reference to a person who should sell or keep open shop for the retailing, dispensing, or compounding poisons, or who should take, use, or exhibit the name or title of "chemist and druggist," not being duly registered, should be liable to a penalty. The only word in that section which it could be suggested could hit the present defendant was the word "sell." It was said that he sold—

Baron Pollock: The words are governed by "any person."

Mr. Finlay: Yes. "Any person who shall sell poisons, not being duly registered, shall be liable to a penalty." Now I say it is impossible to say this assistant sold this medicine. The seller was the principal—the chemist—as whose assistant he was acting. That the services of an unqualified assistant are recognised in the carrying on of the business of a pharmaceutical chemist and druggist is manifest from the 17th section, which, after laying down very careful regulations as to the precautions to be observed in the sale of poisons, says for the purposes of this section—

Baron Pollock: "This section." It does not say, "Of this Act." That is rather peculiar.

Mr. Finlay: Your lordship sees that the 17th section provides "It shall be unlawful to sell any poison unless the box is distinctly labelled," and so on. That would be done by the assistant, because the labels would be kept in readiness until the time of sale, and then it would be put on by the assistant who sells—not by the principal. Read section 15 as a whole—

Baron Pollock: My difficulty is this. Here the duty is cast upon the principal of doing certain things. The prin-

principal may have gone to see some sick person. A woman may come in and say, "My child is sleepless; give me some laudanum." Surely it is for the seller to say whether he is selling poison or not.

Mr. Finlay: My contention is that it was never intended by the Act to strike at assistants who do not possess any of the qualifications enumerated under the Act.

Baron Pollock: You say the man is not liable, and the principal is not liable because he has nothing to do with it?

Mr. Finlay: If the regulations prescribed by the Act are observed, then no one is liable. The principal is the qualified chemist, and the regulations prescribed by section 17 have been observed.

Baron Pollock: Then what is the good of section 15?

Mr. Finlay: It is really to prohibit the carrying on of the business of chemist or druggist by a principal who is not qualified. They hit at that in every possible way. To prevent the evasion of the Act, section 15 is framed in the way it is. They say, "Any person who shall sell or keep open shop for the retailing, dispensing, or compounding of poisons, or who shall take, use, or exhibit the name or title of chemist and druggist without being duly registered, shall be liable to certain penalties." The keeping of open shop is the act of the principal. It would be absolutely impossible to carry on the business of a chemist if every act of sale of any medicine containing poison had to be done by the hand of the principal himself. He must, in the nature of things, leave these acts to be performed by assistants. The list of poisons your lordship sees includes poisons which are contained more or less in a great many prescriptions. Arsenic is used in tonics and other medicines. Prussic acid, cyanide of potassium, strychnine, and aconite are all used as medicines, as also is opium and ergot of rye. What a state of things it would be if a qualified chemist could not sell a drug which is wanted immediately, or is of no use at all, without being there himself. It would render the business of a chemist and druggist absolutely impossible, and if this decision stands it is very difficult to see how chemists and druggists can carry on business at all unless the assistant to be employed in the business is himself to be a qualified chemist and druggist. I submit that is contrary to what was contemplated by the Act. All that the Act secures is the liability of a competent principal, and if that is secured there is an end of the matter.

Baron Pollock: You say that section 17 does not contemplate the sale of poisons by apprentices or servants as an unlawful act?

Mr. Finlay: Exactly. And that I say is really decisive in this case, because section 17 plainly implies that under the Act it is lawful for an unqualified assistant to sell. Really if this decision stands chemists may shut up shop.

Baron Pollock: As far as poisons are concerned?

Mr. Finlay: That is practically the whole business, because no chemist could live for a week if he were not at liberty to dispense prescriptions containing some of the articles mentioned in schedule A.

Mr. Justice Hawkins: The section says distinctly "labelled with the name"; and that cannot mean the name, of the assistant.

Mr. Finlay: Certainly not.

Mr. Justice Hawkins: If the master or keeper of the shop happens to be absent, I do not quite see how this provision is to be worked out.

Mr. Finlay: There certainly is a difficulty in construing the word "seller" in that part of the Act.

Mr. Justice Hawkins: "On every sale of such article the seller shall before delivery." In that case, if the master happened to be absent from the shop, if this is to be applied it must mean the assistant.

Mr. Finlay: I think it does. I think the name and address of the seller meant the principal, and then the part your lordship has called attention to must mean the assistant, who actually carries out the transaction for the master.

Baron Pollock: The difficulty to my mind is this. Rightly or wrongly this statute seems pointed to prevent persons either keeping open shop or selling poisons unless they be persons who possess a competent practical knowledge of their business. Well, it may be said there is no harm if a man comes in and asks for rhubarb pills or castor oil in anyone serving him; but when a man asks for laudanum or opium,

or brings in a prescription, is it not intended that he who makes up the medicine should be a person who knows the force, value, and effect of the drug? Supposing by a mistake the medical man should write 6 grains of strychnine instead of $\frac{1}{2}$ grain, according to your construction no one would be liable because the boy had made up the prescription and some one had been poisoned. The master would say, "I am not liable. The boy put outside the word 'Poison.'"

Mr. Finlay: I submit what the Legislature did was to secure the liability of a competent qualified principal.

Baron Pollock: Did it not make the qualified principal liable for what he did in his business?

Mr. Finlay: It is said that certain regulations should be observed in the sale of poisons. It would not make the principal liable for any mistake of the assistant if he employed a reasonably competent assistant. Your lordship will see to what extent it would go, because it would end in its being necessary for every assistant in the shop to be a qualified chemist.

Baron Pollock: If he is to sell poisons—the man who puts up a parcel and rinses glasses, he need not be. He might be told, too, that he could sell anything off the counter, such as toothbrushes or corn-plasters. (A laugh.)

Mr. Finlay: The principal cannot always be there. Of course, the qualified chemist is bound to exercise great care in selecting his assistants.

Mr. Justice Hawkins: Supposing he said, "I have known this boy a long while; he is a very harmless boy, and knows the bottles that contain castor oil and where rhubarb is"—(laughter)—but at last comes the time when, being careless and in a hurry, he puts in a little poison, or a little too much of the stuff the patient asks for?

Mr. Finlay: I take it no chemist would be likely to employ a boy such as in "Pickwick" was left in charge of the shop. (Laughter.)

Mr. Justice Hawkins: Do you say that a chemist may employ qualified or unqualified assistants as he pleases?

Mr. Finlay: Certainly.

Mr. Justice Hawkins: May a chemist have two shops?

Mr. Finlay: He may be able to ride two horses at once.

Mr. Justice Hawkins: Someride and drive six. (Laughter.)

Mr. Finlay: Every case of that kind would be a question of fact whether the chemist did really *bonâ fide* superintend the business of his shop.

Baron Pollock: He may be eating his dinner. I see, you can ride the six horses you were speaking of through this Act of Parliament—(laughter)—if this construction is to be put upon it.

Mr. Finlay: Of course, innumerable cases of some difficulty and some subtlety may be put. But my argument is this. The Legislature might have thought that no unqualified assistant should be allowed to make up any of these medicines containing poisonous ingredients, but as a matter of fact it has not prohibited them, and it has not done so because it would be intolerable to the man who had to carry on his business.

Mr. Justice Hawkins: Why intolerable?

Mr. Finlay: I submit not only has the Legislature not enacted that every assistant employed shall be a qualified assistant, but it has shown plainly that the contemplation is the opposite.

Baron Pollock: There are some other words at the end of section 17, to which you did not call our attention, and which seem important. It says the provisions of this section shall not apply to any medicine supplied by a legally qualified apothecary to his patient, nor apply to any article when forming part of the ingredients of any medicine dispensed by a person registered under this Act, provided, &c. Does not this wording show that in dealing with poison it should be a person employed who is qualified under the Act?

Mr. Finlay submitted that the words of the section showed that the sale by an unqualified assistant was contemplated as lawful. It was clear that the provisions were only to apply in cases where poisons were dispensed by persons not qualified under the Act. If the poison was merely an ingredient in the medicine dispensed by a qualified person then the regulations did not apply.

Baron Pollock: That would mean, then, that a bottle of medicine sent out by a qualified chemist would be differently labelled to what it would be if sent out by his unqualified assistant.

Mr. Finlay: Allow me to point out that the consideration which your lordships have been good enough to suggest might be very good reasons for altering the Act, but no reasons for construing the Act in a different way to that which was originally intended. Of course the question would arise in every case whether or not there was a real control by the principal.

At this stage of the proceedings the court rose for the day.

Upon their lordships taking their seats on Wednesday morning, Mr. Finlay resumed his argument.

Mr. Finlay said that there were, so far as he was aware, only two cases which had arisen on the construction of this statute which had any bearing whatever upon the point before their lordships. The first he need only mention. It was the Pharmaceutical Society and the London and Provincial Supply Association, which went to the House of Lords. The point there decided was that a corporation was not within the language of the statute, that a corporation was incapable of qualifying by undergoing the necessary examinations to become itself a pharmaceutical chemist, and therefore the corporation was not liable to the penalty for selling drugs.

Baron Pollock: That was a limited company.

Mr. Finlay: Yes.

Mr. Justice Hawkins: That does not touch this question.

Mr. Finlay: It certainly barely touches it. I do not think it affects the case of an assistant.

Mr. Lumley Smith: According to my view it has some bearing upon it.

Mr. Finlay: The only possible bearing is this: The assistant employed in that case by the corporation happened to be a qualified assistant, and Lord Selborne said he thought a corporation who carried on business as chemists and druggists were bound to employ a qualified assistant. The other case, which is in 8 Q.B., has really some bearing on this point. It arose under the 17th section of the Act. There the respondent kept the shop, being paid commission by W. Paterson, chemist and druggist, of Oxford, on all goods sold in the shop; and it was held—and properly held—that the respondent was the seller within section 17. The packet was not labelled with the name and address of the respondent, but of W. Paterson, chemist and druggist, Oxford. Mr. Justice Grove and Mr. Justice Lopes dealt with that point. Mr. Justice Grove said, "I am of opinion the seller is the person who actually conducts the business of sale, although not necessarily the person by whose hand the sale is made. For instance, I do not think the woman who, in the present case, handed the packet over the counter was the seller; nor do I think the chemist, Paterson, can be regarded as the seller, because he did not live or carry on business on the premises, and could not possibly comply with the provisions of the statute."

Mr. Justice Hawkins: I do not see how any doubt could have existed in that case, because section 17 says, "For the purposes of this section the person on whose behalf any sale is made shall be deemed to be the seller." As between the servant and the shopkeeper, for every offence created by section 17, the section declares the person on whose behalf the sale is made shall be deemed to be the seller. I do not think that authority assists us very much.

Mr. Finlay: It is merely an illustration of section 17, which section I pray in aid. The Act meant the seller, and the only seller, should be the person only who keeps the shop.

Baron Pollock: It may be said, if a complaint were made to a chemist that a bottle of poison had been sold at his establishment on a particular day without a label, he might say, "That is not my fault; I was away, and my servant did it." It is necessary, therefore, to make him personally liable for the act of his servant. The moment you get to the real question of dispensing poisons this very section goes back. Where there is a prescription made up, or where there are ingredients dispensed under the Act, then the statute does not apply. In both these cases the Act requires that the medicine should be made up by his own hand.

Mr. Justice Hawkins: There seems to be a very good reason why you should require a competent person; a person conversant with these matters should be the person who actually sells. Take, for instance, an arsenical preparation. A well-qualified person would know precisely what quantity of arsenic would be capable of doing an enormous amount of mischief and harm. An unqualified

person might not know that the Act requires, if a person who is a comparative stranger comes in and asks for poison, that all sorts of inquiries should be made. I can very well understand, when you deal with such matters as poisons, some of them more or less strong and deadly, the Legislature requiring a qualified person to deal with the sale of them. I know it can be said there is hardship, and our judgment may affect some thousands of persons, because a man who keeps open shop will not be able to leave the shop to anyone he has confidence in unless he is a qualified person. I am not sure there is hardship in that. A person who wants to sell poison may very well say, "I am here during certain hours, and if you want to buy poison you must come when I am in. In my absence my poisons' cupboard is locked up."

Baron Pollock: The same statute gives an opportunity to apprentices and assistants; if they have been three years assistants, then they can pass what is called a modified examination.

Mr. Finlay: The apprentice would spend his period of probation in being summoned and fined for acting before he was qualified. (A laugh.) The period would be spent in attending proceedings instituted by the Pharmaceutical Society for selling poisons without being qualified; he would not have got to the stage of necessary experience. He would become an expert lawyer as far as the Pharmacy Act is concerned, but would not get the necessary experience in the shop. I am quite sensible of the weight of the observations that have fallen from the Bench, but I would respectfully suggest that they would be more in point if the proposal was to alter the law for the purpose of enacting that no person should be employed in the shop who has not passed the examination. I think I can satisfy your lordships that the Legislature have not done it, and I can suggest a very good reason why they stopped short of that point. The reason is that if the law were as the Pharmaceutical Society would like it to be, it would shut up the shops of the smaller chemists. The bigger men could have qualified assistants; the smaller man, himself qualified, cannot always be in the shop. He may desire occasionally to have dinner or supper or to attend divine service.

Mr. Justice Hawkins: There are other occupations besides attending divine services in this world.

Mr. Finlay: I put only the more serious ones. (Laughter.) Is the chemist to put up the shutters whenever he goes to dinner, supper, or church?

Mr. Justice Hawkins: The lawyers do. They set a very good example by putting up "Return at two o'clock." (Laughter.)

Mr. Finlay: The effect of all this would be to ruin the business. It is all very well in the interests of the larger chemists whose Society have brought this prosecution. It is impossible for the business of a chemist's shop to go on unless the prescriptions containing one of the drugs mentioned in schedule A can be made up. Is it to be said that the business of the shop is to be stopped whenever a chemist is away, unless he can afford to have a qualified assistant? It is all very well for the bigger chemist, but it is the ruin of the smaller chemist. He cannot be always there; he may be summoned on a jury. (Laughter.) I am reminded by my client that a registered chemist is exempt from serving on a jury.

Baron Pollock: No doubt the result of the trial of *Bardell v. Pickwick*. (Laughter.)

Mr. Finlay: I think I can really demonstrate to your lordships from one section of the Act that the Legislature has not done what might or might not be desirable. It would involve the extinction of the smaller chemists. It may be these chemists ought to be offered up as a sacrifice for the good of the public, but I submit there are reasons against it. Take section 17. It contains provisions as to the sale of poisons which must be complied with. Then we come to these words: "Nor shall any of the provisions of this section apply to any medicine supplied by a legally qualified apothecary to his patient, nor apply to any article when forming part of the ingredients of any medicine dispensed by a person registered under this Act." There your lordships have a section containing regulations to be observed for the sale of poisons, but with the provision I have just read. That clearly shows that the Legislature contemplated that the poison might be dispensed by a person not registered under the Act, in which case the regulations laid down in

section 17 were not to be applied. I think the whole scope of the Act shows that the words in section 15 refer to the principal and not the assistant.

Mr. Lumley Smith said he appeared with Mr. Granger in support of the decision of the county court judge. He submitted that the decision carried out a construction of the Act which would support what was the intention of the Legislature. There was no doubt that one of the main objects of the Pharmacy Act was to prevent misadventure arising from poisons being sold by ignorant persons, and to prevent mischief which might result from persons who for nefarious purposes might desire to obtain poisons. If the construction put upon the Act of Parliament by the learned judge were not right, any person who wanted to buy poison would only have to watch when the chemist went to church, and then go and get it as the poor girl did in this case, when she bought Battle's vermin-killer and destroyed herself. The person need only watch when the chemist went out, and then go in and buy, and no one would be responsible. The scheme of the Act was this. Under section 15 two persons were exposed to penalty. First of all, any person who should sell poisons. Undoubtedly the defendant was the person; undoubtedly he did sell poison, and therefore the person who sold the poison was made answerable to the penalty. But as cases might arise where it was impossible to prove that the person had actually sold poisons, although he kept open shop for it, the Legislature said, "In that case we will do something which will hit the head of the establishment." Then came a section carefully prepared, to strike at both the assistant who sold and the master who sold in the shop. These persons were liable to what he might describe as a civil penalty of 5*l.*, to be recovered in the county court, and in addition to that came the cumulative section—section 17.

Baron Pollock: Fifteen applies to poisons sold by a grocer, pastrycook, or anybody?

Mr. Lumley Smith: Undoubtedly; by a chemist or grocer, master or servant. The learned counsel went on to say that section 17 applied to the general regulations that were always to be kept on foot by the person keeping open shop. The word "seller" had the ordinary meaning. This was not the first time the question had been discussed in open court. His friend when he spoke of the Pharmaceutical Society forgot that when he was counsel in the case which went up to the House of Lords, where he argued with very great ability, he took the opposite view to that which he had been putting forward that day. The point in that case was whether an incorporated association was not a person who kept open shop. Their lordships decided that, having regard to the word "person" being used in the Act, which person was required to pass examinations, that the corporation was a *casus omissus* and not amenable to the section. The proceedings were taken under section 15, and one of the main arguments for saying they were liable was that, if it were held the corporation were not liable, then the public would lose the protection of section 15 because they would have no one to proceed against. The Lords had to consider how far that was so, and they went into the question now before the court, and both Lord Selborne and Lord Blackburn stated their view that "seller" would include the assistant—the person who actually made the sale. Mr. Finlay then argued that the selling of the drugs and not keeping the shop was the real offence. He (Mr. Smith) would read an extract from the judgment of Lord Selborne dealing with the point. His lordship said, "I have now to consider the main argument of the appellants, namely, that the Act would fail to accomplish its purpose unless a corporation were included in the section. It seems to me the argument cannot be successfully maintained. The acts of selling and compounding are struck at whether the person who does them is the principal to whom the business belongs or anyone he employs to carry on the business. He who sells, whether master or servant, whether he be the principal or the person to whom the conduct and management of the sales is delegated, is struck at by section 15." That was, he submitted, completely in point; it occurred to Lord Selborne that a man might have two shops and an unqualified person at each shop. Lord Blackburn was of the same opinion as Lord Selborne. It was found as a fact in the present case that young Wheeldon was in charge of the shop. In the same case, that of the London and Provincial

Supply Association, in the Court of Appeal, Baron Bramwell and Lord Justice Baggallay expressed the same opinion. Lord Justice Baggallay said, "In my opinion the seller is the actual seller, and not the individual or corporation on whose behalf he may act, and this is supported by section 17." So that two judges of the Court of Appeal and two of the noble and learned lords in the House of Lords, having this point before them, expressed a view unfavourable to the appellant in this case. Of course it was not conclusive in this matter, but language such as that he had quoted would have great weight with the Court. The other case which had been referred to was not in any way in Mr. Finlay's favour. There it was only necessary to consider whether the woman who sold was acting on behalf of the person who was occupying the shop or some one who was behind him. In all the circumstances he (Mr. Lumley Smith) submitted that the decision of the learned county court judge was a right one and ought to be affirmed.

Mr. Rawlinson, in reply, urged that the Act of 1868 was a penal statute, and therefore there must be a direct clause forbidding what the defendant had done before the penalty could be incurred. They had here, he said, this fact: the Act might have been made considerably clearer; it might have said at once that it should be an offence for an unqualified assistant to compound or sell poisons. But there was a preamble which never mentioned the sale of poisons at all, and was directed entirely against people who kept chemists' shops for the dispensing of poisons; the only reference to this particular offence being in section 15. He should submit that these were clearly offences *ejusdem generis*. What was meant to be aimed at was this, that there should not be a shop left without some qualified person in general charge. Here they had a particular article, the contents of which were perfectly well known by the manager of the establishment—a duly-qualified man—and there was no suggestion that the defendant made up poison in any way.

Mr. Justice Hawkins: The assistant here was not a duly qualified man?

Mr. Rawlinson: No; but the other assistant, the manager, was.

Mr. Justice Hawkins: That makes it less a case in which you sympathise with the defendant.

Mr. Rawlinson: He was absent, as a matter of fact, at church. The defendant here simply handed over a particular preparation, the constituents of which were known to the employer, and nothing different would have happened if the qualified manager had been there. The only accusation against us is under section 15. I submit it was never meant to apply to the case of an apprentice simply selling across the counter, but to the case of a man compounding or sending out drugs, the contents of which he did not know.

Mr. Justice Hawkins: You must go the length of saying that if a qualified person opens shop, and he has an apprentice who knows nothing whatever about poisons, who is young, fresh, and innocent, the principal can go to church all day long. And if the young apprentice sells forty boxes of vermin-powder, and people poison themselves, there is no penalty attaching to the boy because he was innocent, and no penalty attaching to the shopkeeper because he was attending to other duties. The protection to the public would be mighty small if that state of things were permitted.

Mr. Rawlinson: That would be a direct evasion of the Act.

Mr. Justice Hawkins: Not necessarily.

Mr. Rawlinson: Even supposing your lordship does rule in the way in which your lordship indicates, the apprentice can still sell certain poisons which are made up in certain ways. The word "sell" is put in the section to strike at the quack who would sell medicine out of doors.

Mr. Justice Hawkins: Do you say a private individual could sell arsenic?

Mr. Rawlinson: He would not be doing it under the supervision of persons who were properly qualified.

Mr. Justice Hawkins: That shows the preamble does not cover the whole Act.

Baron Pollock: I put it that the section means this—no other person than a pharmaceutical chemist registered under the Act shall sell poisons; and it does not matter, to my mind, a bit whether it is a grocer, or baker, or pastrycook, or anybody else, or whether he is the assistant to a chemist.

Mr. Rawlinson contended that the Pharmacy Act was analogous to the Licensing Act, which was directed not against the barman, but against the man who was licensed to keep the public-house.

Baron Pollock: That Act was not passed for the purpose of protecting the beer-drinkers.

Mr. Rawlinson: The Pharmacy Act has been in existence twenty-one years, and in the court below I challenged the gentleman who was against me to point to a single conviction of this kind. He could not do so. That shows there must have been a pretty wide-spread opinion that the interpretation now sought to be put upon section 15 was not meant.

Mr. Justice Hawkins: It shows also that people had not read the judgment of the House of Lords which was given some years ago.

Mr. Rawlinson contended that if the legislature had intended the 5*l.* to be recovered from apprentices, they would never have directed the proceedings to be taken in the county court. They would have made the proceedings be before the justices, and not in the county court, where a judgment for 5*l.* against an apprentice would be absolutely worthless. A man must be selling something of which he can pass the title himself, in which, in some way or other, he was getting the benefit himself. In the case before the House of Lords Lord Selborne had not his mind directed to a case such as this. Moreover, Lord Selborne himself added, "It by no means follows that all the drugs are necessarily to be sold by a qualified person." Those words showed that Lord Selborne did not mean to decide a case such as this.

Baron Pollock: Do not you think that Lord Selborne referred to drugs which are not innocuous?

Mr. Rawlinson urged that that was not so. Mr. Justice Grove had said, "The object of the Act is the protection of the public, and the protection contemplated by Parliament is that the person who controls the sale of poisons shall be a duly qualified person." The question raised, as Mr. Finlay had pointed out, was one which, if answered as by the county court judge, would undoubtedly injure a tremendous number of small chemists throughout the country. It would be a great innovation and a great surprise to a large number of chemists who were carrying on their business at the present time. The words in a statute creating a penalty should be very clear indeed, and ought not to be inferred by language used in other parts. If really new legislation was wanted the Society, of course, could set about to obtain it; but it did seem hard on those chemists who for twenty years had gone on under the present system, and unless the section was clear he should submit that the penalty could not be enforced.

Mr. Baron Pollock: The court will take time to consider its judgment. It must not be assumed from our doing so that at present we have any serious doubt on the subject. But it is one, undoubtedly, of importance; that is to say, it must affect a considerable number of persons whichever way our decision may be. On the one hand there are the chemists, and on the other hand the public at large are affected by the danger of poisons being sold improperly. We should like, therefore, to refer to the authorities carefully before we deliver our judgment.

THE PHARMACY ACT.—FAILURE OF THE PROSECUTION.

ON Monday, in the Leeds County Court, before his Honour Judge Greenhow, with a jury, the Pharmaceutical Society of Great Britain sued Mr. J. W. Law, of York Road, Leeds, for the sum of 15*l.*, being the amount of three penalties alleged to have been incurred under the 15th section of the Pharmacy Act, 1868. Mr. Banks appeared for the Society, and Mr. Dunn represented the defendant. According to the opening statement of Mr. Banks, small quantities of laudanum had been sold to different persons in the defendant's shop on September 6, October 26, and October 29 of last year. Counsel said the question for the jury would be whether the stuff supplied was really laudanum. An analyst had had the compound submitted to him, and he would be called to prove that it was laudanum. Mr. Dunn, however, said that Mr. Law had been fined before for a similar offence, and he had instructed his assistant, who was in charge of the shop, not to sell the compound. The first occasion on which the poison was alleged to have been purchased, it was

fetched by a little girl. She, in cross-examination by Mr. Dunn, said that she had been sent by Mr. Charles Jones, a rival chemist, who had instructed her to say she wanted the laudanum for a Mr. Hargreaves. Mr. Jones admitted having told the girl, who was his servant, to say the laudanum was for her father. He said he had had custody of one of the bottles containing the preparation for three weeks before it was sent to the analyst, but he had not put any seal on it. The other bottles had been kept in the charge of the persons who had procured the stuff under his directions. The defendant, having been called, said he was away from home last September. He stated that he only kept laudanum for use in making proprietary medicines, and his assistants had instructions not to sell poisons. The assistant who supplied the customers in October said there was no laudanum in the shop at that time. A long argument took place between counsel as to whether or not the defendant would be liable for the act of his servant who sold the article. Mr. Banks explained that Mr. Jones was employed by the Society to take the necessary steps for securing the conviction. The verdict of the jury was "We are not satisfied that the laudanum was sold on any occasion," and judgment was given accordingly.

Personalities.

MR. HILL, chemist, Lincoln, has secured the contract for drugs to be supplied to the Lincoln Board of Guardians.

THERE is only one registered female pharmacist in Maine, U.S.A., Mrs. Mary E. Bucknam. She has a shop in Paris, a town in that State.

MR. SAMUEL FIGGIS (of Messrs. Lewis & Peat, Mincing Lane) has resigned his position as Liberal and Radical candidate for the borough of Hampstead, owing to business engagements.

MR. H. HELBING, F.C.S., for some years the apothecary at the German Hospital, Dalston, has resigned that appointment and established himself at 63 Queen Victoria Street as a consulting and analytical chemist.

MR. JOSEPH BROOKS PARKIN, chemist and druggist, Kirkgate, Ripon, has been appointed by the Lord Chancellor a justice of the peace for the city. Mr. Parkin has long held prominent positions in the public life of Ripon and the neighbourhood.

DR. G. SIMS WOODHEAD has been selected by the Royal College of Physicians as the director of the new Research Laboratories on the Thames Embankment. Dr. Woodhead is a distinguished graduate of the Edinburgh University, and has had charge of a similar laboratory in Edinburgh for some time.

WE understand that Dr. Ostermayer, a well-known German chemist, and for many years a partner in the firm of H. Trommsdorf, Erfurt (Germany), chemical manufacturers, has severed his connection with that firm with the end of last year. Mr. Fred. Boehm, of 27 Billiter Square Buildings, E.C., has also ceased to act as the agent in this country for Messrs. Trommsdorf.

DR. LAUDER BRUNTON has returned home, and with his return the poetry has been taken out of the pretty little story about the dog that bit him. If he did tell his colleagues that they did not know how to manage a dog, they did not succeed in getting any "wrinkle" from him about that, for it was because of the unskilful way that he caught the dog that it bit him, and after he was bitten he recollected that he was not inoculated by Pasteur.

MR. GWILLYM EVANS was in his place at the Pharmaceutical Council table on Wednesday for the first time during the past three months. Mr. Evans has just returned from a visit to the south of Europe and Algiers for the benefit of his health, which is greatly improved. Mr. Evans told one of our representatives that the only English chemist in Algiers was a German who posed as such, but who, unfortunately, did not speak English. There seems to be an opening for English enterprise in that quarter, as a large number of our countrymen visit it in search of health.

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THE NEW PHARMACY BILL.

THE Pharmaceutical Council has tabled its draft Bill for the amendment of the pharmacy law of this country, and, by the careful calculation of times and seasons, has made it impossible to ascertain the general opinion of its constituency or of chemists generally as to what Parliament shall be asked for. We are reluctant to adopt an attitude which can have

anything like an appearance of opposition to a Bill which contains nothing which we object to and something which we approve of; but it is impossible to assume any enthusiasm in favour of a measure which seems to be so utterly inadequate in its expression of the legitimate wants and needs of the trade. We confess to a strong feeling of disappointment with the draft Bill. We had heard that the Council had decided to go for something beyond the curriculum proposals of their last two measures, and we were eager to offer loyal and hearty support to a Bill in which should be laid down the principles of a policy which we thought the clearest headed men in the pharmaceutical profession were pretty much agreed about. We have said again and again that, as things now are, in any such enterprise the Pharmaceutical Council must be the leader. We say, too, that in formulating our demands for the consideration of the legislature it is both straightforward and good policy to expose our entire claim; and we do not believe for a moment that the Bill before us embodies the ideas of any individual on the Council as to the limits of what pharmacists have a reasonable right to ask for at present. The important clauses conspicuously absent are (1) one following that framed by Lord Milltown insisting on the presence of a qualified manager in every branch shop as manager; and (2) a correlative clause somehow preventing the absurdity of qualification by incorporation. Surely there is a general agreement that the personal qualification for all who profess or call themselves pharmacists is what we have to aim at. There can be no substantial progress without that. But does anyone say that this is accepted in theory, but that the time is not opportune to press it? We say in reply that the opportunity is obvious, because the House of Lords has, on its own initiative, accepted the principle, and that every year gets us further away from that very important declaration on the part of that branch of the legislature. The Pharmaceutical Council has departed from its previous profession of getting its legislation piecemeal; why has it not asserted a claim the most essential of all if the Pharmacy Act is really to have any rational effect?

To what is in the Bill we see, as we said, no objection in principle. The curriculum proposition is not calculated to excite our reverence, but it has been advocated by all who are best in a position to judge of its desirability, and we accept their opinion as sufficiently influential. Schools likely to be affected will, however, be justified in seeing that their interests are safeguarded. Nor can we grudge to the Society the power asked for to give its membership to persons who pass the Minor examination, and who may wish to have it. The statistics published this week, indicating an acceleration of the numerical decline in the Society's strength, show that it is essential to do something if its position is to be maintained. The 6th clause, limiting the right "to compound or keep open shop for compounding medical prescriptions" to qualified persons is what we have frequently advocated, and it is the redeeming feature of the Bill. It is somewhat loosely drafted, for we are not told what a "medical prescription" is. Is it anything ordered by a medical man, or is it any and every prescription for medicine? It is true that the same term is used in the Irish Pharmacy Act, but this does not seem to render a definition unnecessary. It will be observed that the actual compounder of the prescriptions as well as the person who keeps open shop for the purpose is required by this clause to be qualified. This is an important point. It may be said that in view of the Interpretation Act of last session the clause will be strong enough to prevent companies of unqualified persons keeping open shop for dispensing prescriptions; but this would be a very slender reed to trust to, and whatever

may be the ideas, or however the law might ultimately treat them, we could not regard this as a satisfactory attempt to challenge the baneful system of qualification by incorporation which has grown up among us. A few members of the Council seemed disposed to recognise company druggists by providing for them. This we cannot help thinking would be a mistake. Pharmacists can only with reason advocate the principle of personal qualification. If the companies have anything to say which will justify their existence let them say it to Parliament, and there obtain the best terms they can.

THE IODINE CONVENTION.

NEGOTIATIONS have been pending for some considerable time, we believe, for the formation or reconstitution of a convention among the producers of nitrate of soda in Chile; and in the course of the present week the various Nitrate Companies in London announced that they had agreed upon the adoption of a common plan of action, the outlines of which they had communicated by cable to the works in South America. So far as our information goes, that militant latter-day Cræsus, Colonel North, has been a guiding spirit in the proposed new combination; and he has also, if rumour speaks true, taken an equally prominent part in the reorganisation of the iodine combination, the renewal of which is expected to be made public simultaneously with the announcement of the final ratification of the nitrate ring. According to the information which has been communicated, and which evidently comes from the nitrate people themselves, and therefore represents exactly what they think it to their interest to make known, the new nitrate combination includes not less than nine-tenths of the whole, which may mean, of course, nine-tenths of the output, or 90 per cent. of the individual producers—a very different thing, maybe, so far as the probable success of the ring is concerned. The production of nitrate is to be restricted and brought in harmony with the estimated consumption, and the members of the new ring are to be assigned a percentage proportion of the output, in accordance with the capacities of their respective "oficinas," or works. The selling price of nitrate, "so far as the committee may be able to regulate it" (a significant clause), is not to exceed 9½ 10s. per ton, which leaves room for a pretty considerable advance on the present quotations. So far as iodine is concerned, the new combination which has been formed in Chile is to be approved of as soon as the nitrate convention is completed, and the London committee will immediately advise the iodine committee in Iquique that the late combination is to be continued until the new one can be put in force. From the scanty information which it has been possible for us to gather it appears that the managers of the iodine ring in Europe are in daily expectation of a cable from America announcing the adhesion of the interested parties in that quarter to the proposed scheme, but we also hear that there is a strong opposition party in Chile, mainly among the newer producers. To the makers of iodine preparations and the trade generally the final announcement that the iodine convention has been renewed will come as a relief, for, bad though the monopoly of a trade ring may be, it is certainly preferable to the continuation of the state of suspense. It is not, perhaps, very astonishing that the negotiations for the renewal of the convention have been so exceptionally prolonged. The combination bosses on this occasion have had to deal with a far greater number of producers than had to be considered

when the previous combination was planned. What the new price for the crude iodine will be—assuming the negotiations to be successful—is still unknown, though very possibly the old price of 9 $\frac{1}{2}$ per oz. may not be materially altered. The price was a highly profitable one to the producers, but owing to the increase in their numbers each man's quota under the new ring will probably be smaller than under the old, for it is unlikely that the consumption of iodine has grown in the same proportion as the capacities for its production. On the other hand a material increase in the price might affect the consumption in some directions, and would certainly check its growth. In the meantime a considerable stock of iodine must have accumulated in South America and elsewhere in the six weeks during which the sale has been practically suspended, and this consideration may weigh in the fixing of the new price. In fact, it is a question whether during the transition period the representatives of the iodine combination could have sold any of the South American packages in their care, because they might in so doing have parted with merchandise belonging to consignees who might have decided to remain outside the combination, or claimed their property back again if the negotiations had fallen through. But the difficulty and obstacle to the new combination appears to lie less in the fixing of a price or a term of agreement than in the apportioning of the share of each combiner's output. Whether the ten per cent. or thereabouts of the nitrate interests who seem to have held aloof from the nitrate ring will be a disturbing factor in the proposed iodine convention remains to be seen, and altogether there are so many data of interest, concerning which the trade generally are kept in the dark, that it is very unsafe to venture upon any forecast of the future. A suggestion has also been thrown out that the combination has already been settled some time ago, but that its ratification is kept secret to give the representatives in Europe time to secure any stray second-hand parcels that might disturb the working of the scheme. From another quarter comes the statement that the German banking firms who finance much of the South American business have decided that they will not in future advance any money on iodine consignments, and elsewhere we hear another story, to the effect that the iodide manufacturers at the time entered into a bond, under a heavy penalty, to buy no iodine except from the firm who acted as the combination agents, and that this engagement was made not with the combination but with the individual firm in this country who acted for that body; that consequently, upon the dissolution of the combination, the iodide makers still remained bound to purchase only from the firm in question and at that firm's price, and therefore dared not take advantage of any cheap parcels which might be offered from elsewhere. It seems scarcely imaginable that any sane persons would have bound themselves down in such a way, and we do not give this report because we believe in it, but merely as an illustration of the rumours which obtain currency in connection with this article, and the difficulties which surround all attempts to get at the bottom of the intentions of the people who guide its course.

THE UNQUALIFIED SELLER.

THE many chemists who took an interest in the recent action of the Pharmaceutical Society against the unqualified assistant of a qualified chemist to recover a penalty for the sale of a poison, and the comparatively few who gave tangible proof of their desire to see the question definitely settled, will observe with satisfaction from our legal reports

this week that all that could be done in this direction has been accomplished. The pecuniary sympathy of the trade with the defendants was not lavish, but it seems to have been sufficient to enable them to present their case to the High Court of Justice in as forcible a manner as was at all possible. The point in dispute, stripped of the confusion which gathered around it when persons affected argued it on the basis of their own experience or predilections, was not a large one, and did not admit of very lengthy elucidation. It involved simply the construction of the words "any person who shall sell" in the fifteenth section of the Pharmacy Act. At present the judgment of the Court is suspended, though the eminent judges who heard the arguments volunteered the statement that they did not postpone their decision because they entertained any serious doubt. Nor did anyone in court entertain any serious doubt as to their Lordships' opinions. For the moment, however, we may not anticipate their interpretation of the law, and all that we propose to do here, therefore, is to give a brief outline of the arguments submitted.

The case was commenced on Tuesday afternoon, Mr. Finlay, Q.C., arguing in support of the appeal for about three-quarters of an hour before the court rose. Quoting the Pharmacy Act, or so much of it as was material, he aimed to show that to enforce the interpretation put upon it by the Wandsworth county-court judge would render the conduct of many chemists' businesses practically impossible. He read over the poisons schedule, and urged that the substances therein named constituted so large a portion of the medicines supplied by chemists that those who could not afford to keep qualified assistants could never leave their businesses. Such poisons as ergot of rye, he said were sometimes wanted urgently, and it would be a serious matter if these could not be obtained promptly when they were prescribed. He strongly pressed, besides, the point which has been raised by some of our correspondents, that the 17th section evidently contemplates the sales of poisons by apprentices and unqualified assistants. He was met by frequent interpositions on the part of both judges, Mr. Baron Pollock wanting to know what protection was left for the public if neither the master nor the assistant was responsible, and Mr. Justice Hawkins manifesting curiosity as to the number of shops manned by unqualified servants a qualified chemist might keep. Mr. Finlay parried these questions by maintaining that every case must be dealt with on its merits, the evidence to show whether, in a general way, the shop was or was not under the guidance of a qualified man. Besides, he argued, even if their lordships' suggestions showed that the public had not sufficient protection, that only went to show that the Act was imperfect. The Act did not contemplate the prosecution of assistants, and the Court had only to deal with what it said, and not to prescribe what it ought to have provided.

The next morning Mr. Finlay emphasised and reiterated these arguments, and then took his departure. Mr. Lumley Smith, Q.C., who led for the Society, contented himself with a comparatively short speech, but a weighty one. He relied principally on the dicta of the judges in the case of the Pharmaceutical Society *v.* the London and Provincial Supply Association, which he explained succinctly, remarking that Mr. Finlay had appeared in that case, and that one of the points then urged on the court by his side had been that the public had protection because the actual seller of the poison was required to be qualified. Quoting the opinions on this point expressed by Lords Selborne, Blackburn, Bramwell, and Baggallay, all unmistakably in support of the judgment now in question, Mr. Lumley Smith said that those dicta were not, of course,

conclusive, because this point was then only collaterally raised, but he considered that they left little doubt that any person who sold poisons—chemist, grocer, pastrycook, master, or servant—was equally governed by this 15th section of the Act. If Mr. Finlay's contention were admitted, then it would be only necessary for a person to watch his opportunity and get poison when the master was away from the shop, and no one would be responsible.

The judges contested no point with Mr. Lumley Smith, but with Mr. Rawlinson, the counsel who appeared for the defendant at Wandsworth, and who now replied in support of the appeal, there was a running discussion between bench and bar. Arguing that what the Act required was simply that a qualified man should have general charge of a shop where poisons were sold, he being the seller according to law, Mr. Justice Hawkins said he must, if his contention were correct, go the length of maintaining that an apprentice coming fresh and innocent to a chemist might on his second day be left in entire charge of the business while the principal went to church or to amuse himself. Mr. Rawlinson accounted for the alternative terms "sell or keep open shop for selling" by assuming that the first "sell" was intended to hit at quacks or others who might sell poisons in a market, or in some other way than in an open shop; it could not be meant to apply to assistants, because, being often unsubstantial personages, the law would not provide the recovery of a penalty in a county court from them. A suggestion that the chemist's assistant was no more liable to the penalty than would be the barman of a licensed victualler for infringement of a Revenue Act was met by Mr. Justice Hawkins with the remark that the licensing laws were not passed to protect beer-drinkers. Any way, said Mr. Rawlinson, this is a penal statute, and we are entitled to claim that we shall not be fined under it unless the offence is clearly laid down, and not merely inferred, and certainly it cannot be said that the words of the Act are at all definite. He would challenge the other side to show that during the past twenty-one years they had once adopted the interpretation which they now put forward.

In this slight sketch we have only endeavoured to show that the two sides of the question have been put fairly before the Court, and that a well-weighed decision, which ought to satisfy all reasonable disputants, may be very shortly expected.

PORTUGUESE AND BRITISH DRUGGISTS.

It is obvious that the movement which has been started in the Portuguese press and by certain Portuguese politicians for the systematic boycott of everything English is by no means so short-lived as, in the interest of both nations, might have been wished. Perhaps the press and the politicians are not altogether synonymous with what nearer home is known as the Great Heart of the People, but, at any rate, the agitation has to be reckoned with, and we are afraid that the majority of English journals who jeer at the Portuguese boycott, or regard it altogether from the economic and eminently British standpoint of pounds, shillings, and pence, fail to appreciate the length to which a quick-tempered, proud, and hot-headed Southern people may go in sacrificing its own material interests to avenge what it believes to have been a deliberate and undeserved insult. As indicating how far the feeling of bitterness has spread we may mention that in the current issue of the Lisbon *Jornal de Pharmacia e Chimica*, a paper representing the pharmaceutical interests of Portugal, we find a trenchant protest against the continued use of British pharmaceutical

goods by Portuguese pharmacists and drug dealers. The journal in question, after recording its "vehement protest against the humiliation inflicted upon Portugal by England," declares that nevermore in future can there be any thought of amicable commercial relations between the two countries. "The medical and pharmaceutical professions of Portugal," it writes, "can and must reject absolutely all products of British origin. Fortunately, in consequence of their excessive price, the British drug trade has only been able to find a market here for very few of its products, but in future we will even decline to consume these few. Precisely those articles for which we now go to England will form suitable branches for the development of the national industry, or if this cannot be, we can have recourse for them to other nations who will supply them to us as cheaply, or cheaper, than we now import them from England. We know that usually it is not the pharmacist but the druggist or the commission agent who purchases directly from abroad the articles to which we refer, but nevertheless the decision mentioned will find universal acceptance. We must all promptly and completely emancipate ourselves, and all our efforts should be directed to the one end of banishing from our pharmacies all English goods. The undertaking is not a difficult one, for although, unhappily, in other directions English traders can damage us heavily by taking reciprocal measures, yet the poor chemical and pharmaceutical industry of Portugal owes nothing—absolutely nothing—to England. Of the English products now bought here, we may mention, for instance, citric and tartaric acids, sulphate of quinine, calcined magnesia, and adhesive plaster. Yet, although we import and consume the acids, we export lemons and winelees; although we buy quinine, certain meritorious agriculturists of our African provinces of Sao Thomé and Cape Verde have established extensive cultures of the best cinchonas, and maintain large stocks of the precious bark. And we, as pharmacists, let us make for ourselves adhesive plaster and calcined magnesia, or let our assistants learn how easy and simple it is to prepare such goods. We may impart to our readers the agreeable news that at this moment negotiations are actually proceeding in Lisbon to establish a large factory for the preparation not only of quinine and all cinchona salts, but of many other products in which we can advantageously compete with foreigners. Nay, more; we have seen and analysed sulphate of quinine manufactured in Lisbon pure enough to suffice for the requirements of our Pharmacopœia. *Abaixo o commercio ingles!* This is the occasion to show the patriotic feeling of anger which fills all Portuguese pharmacists worthy of the name and of their nationality."—Thus our Portuguese contemporary.

"Down with British commerce!" We have known the cry before, when it sounded, "Burn everything English except English coal!" and we have passed unscathed through the threatened ordeal. Nor do we believe for a moment that our commerce is going to be destroyed by the Portuguese now, or that our own merchants are thinking of reciprocating by deliberately refusing to buy Portuguese wines, or cork, or cereals, or olive oil. It would be easy to pick holes in the logic of the article we have quoted, or to make fun of the patriotic Portuguese pharmacist going into ecstasy over his national adhesive plaster. But what good would come of that? Nearly all European markets are being closed to us by hostile tariffs, but Portugal, though a small nation, has always been a good customer of ours, just as we have been, and will probably continue to be, good customers of hers. Portugal is by tradition a protectionist country, and lately

tier tariff has even been increased, with the result that industrial undertakings are springing up everywhere within her borders, though they are mostly kept up by foreign capital. Of the imports into Portugal this country in 1887 furnished over 3,000,000*l.*; the United States, France, and Germany each about 1,000,000*l.*; Spain, Brazil, and Belgium rather under 500,000*l.* each. Of the exports 1,500,000*l.* went to England, 1,000,000*l.* to France, and about 500,000*l.* to Germany and the United States combined. Of the imports of pharmaceutical and chemical products no detailed figures are available to show the share of the principal countries, but the following articles will give some idea of the quantities of some leading goods imported in 1888: Hydrochloric and sulphuric acids, 666,183 kilos.; soda and potash salts, 7,002,893 kilos.; other chemicals, 2,281,539 kilos.; mineral waters, 99,132 kilos.; tea, 262,752 kilos.; spices, 379,072 kilos.; surgical instruments, 2,497 kilos.; ink, 90,752 kilos.; varnishes and colours, 1,569,645 kilos.; made-up medicines, 94,351 kilos.; medicinal substances, 232,764 kilos.; perfumery, 127,169 kilos. Surely England's share of these imports is more than our Lisbon contemporary indicates, and we sincerely trust that neither English journals, "comic" or otherwise, nor Portuguese papers and politicians will succeed in embittering the commercial relations of the two countries or in diminishing our exports of manufactures to Portugal, and consequently our own power to take in payment for them the goods which form the staple of Portugal's commerce.

COMMENTARY.

AUSTRIACUM, the new element which Dr. Brauner discovered last year in association with tellurium, has also been found by Dr. Anton Grünwald. At least Dr. Grünwald has found in tellurium, antimony, and copper, a hitherto unknown element, X of Mendeleeff's eleventh series. It is related to tellurium and to bismuth, and in his communication to the Imperial Academy of Sciences the author says it is probably identical with "Austriacum."

THE CAMPHOR TREE OF STONECUTTER STREET.—The ubiquitous *Star* man has been to interview a camphor tree, and the following specimen, worthy to rank with the cocaine-yielding cocoa palm of another contemporary, is the result:—"One of the most beautiful as well as useful trees is the *Laurus camphora*, or camphor tree. It is grown from seed, and has to be sown shortly after maturing as the essential oil in the seed becomes rancid and kills the power of germination. Sown fresh the young sprouts come up in five or six weeks. Its growth is very nearly as rapid as the eucalyptus, whose properties it shares also, it being claimed to keep away or counteract malarial influences through its pungent exhalations. In parts of Japan where this tree is planted largely malaria is unknown. It attains a height of 30 feet or 40 feet. The wood is valuable. Trunks or boxes of camphor wood are known as a preventive from the attacks of insects on fur or woollen clothing."

MORE ABOUT ARTIFICIAL MUSK.—The first French journal which gives any particulars of the artificial musk is the *Journal de Pharmacie d'Alsace-Lorraine*. In its last issue this paper says:—"Artificial musk is a chemical product appearing in crystals of a yellowish white colour and of a strong musk odour. For perfumery purposes the crystals should be dissolved in alcohol, with the addition of a trace of ammonia or carbonate of ammonia. This solution, which may be compared to tincture of musk, surpasses the latter in the intensity and penetrating power of its odour. The product to be used in perfumery must previously be diluted in a

homœopathic manner. The following are the rather loose details of the manufacture of the article which have been deposited with the German Patent Office: "Boil in a reflux condenser toluol or toluene, C_7H_8 , with one of the following halogen compounds of butyl, viz., chloride, bromide, or iodide of butyl, along with chloride or bromide of aluminium. The resulting product falls back into the water in the still, where it is decomposed and is distilled in a current of water vapour. The parts which distil between 170° and 200° are collected separately, and treated with a mixture of nitric and fuming sulphuric acid. The product obtained from this process is washed in water and re-distilled in alcohol, from which the 'artificial musk' crystallises out." The patent rights for France and abroad have been disposed of to a syndicate of manufacturing perfumers. There is no doubt that the trade in natural musk, so far as the perfumery branch is concerned, is threatened with a very serious crisis. The use of musk in medicine is very restricted, the article being now only employed in certain cases of typhus.

BAKING POWDER is consumed in enormous quantities in the United States—at least, we have it on the authority of the *Pharmaceutical Record* that \$25,000,000 is the sum which is annually expended in different varieties of this one article. For a long time the manufacturers of cream of tartar baking powder have been waging war against those who make powders with alum as the acidulous component. Now the Board of Agriculture has had a hit at the cream of tartar people, reporting that they charge double the proper price for the article, and take advantage of the public ignorance regarding its composition. The board seems to have some sympathy with the manufacturers of the alum baking powders, for they attempt to discredit Professor Malet's condemnation of such powders by saying that "the evidence furnished by his physiological work is hardly sufficient to justify his conclusions as to the harmfulness of such powders."

AMERICAN PHARMACEUTIC ANALYSIS.—Some time ago an American firm of wholesale druggists offered \$100 in gold to "the first retail druggist in the United States who shall receive the samples, and who will, before August 1, 1889, send us a correct analysis of the adulterated sample of rhubarb." Those who responded received two packets, one of which was a pure and the other an adulterated sample, the constituents of which were:—Low-grade Chinese root, 46 parts; American garden rhubarb root, 46 parts; turmeric, 3 parts; and chrome yellow (chromate of lead), 5 parts. We are told by the *National Druggist* that many thousands of these samples were sent out, and we may fairly infer that at least a thousand persons tackled the samples. But there were only about a dozen replies, and not a single one was correct. No one succeeded in detecting the chrome yellow, but one gentleman said the adulterated sample was yellow dock, another said it was "exhausted rhubarb and the addition of meal," another gave it that it was adulterated with the dried residue from distilleries, and still another succeeded in finding in it "an allied drug, *Rhinacanthus communis*." Our contemporary is very indignant at these results (no wonder), and until his hopes in regard to higher pharmaceutical education are satisfied (and that will not be until after a little of an elementary character is imparted), he tells the failures that the simplest of all tests—throwing a portion of the powder upon water—would have given them a clue which would surely have been followed to a valuable conclusion. Treatment with liquor potassæ, and subsequent tests for lead, would have done the same. Even a half-way competent microscopical examination, without the use of a chemical reagent, would have yielded far better results than any the candidates seem to have attained.

SOCIETY OF CHEMICAL INDUSTRY.

A MEETING of the London section was held in Burlington House on Monday night, Mr. David Howard in the chair. The first piece of business was the amendment of the

BY-LAWS OF THE SECTION.

Post-card notices regarding this had been sent out to the members, but since then the committee had decided to propose further amendments, and these now came from the chair after a mild protest from one of the members present regarding the want of notice. Mr. Howard fully explained the intention of the amendments. It was proposed that in future (1) the executive of the section should consist of a chairman, a secretary, and fifteen ordinary members of committee, one of whom might be appointed vice-chairman. (2) That five members of the committee should retire annually, an election thus taking place every year instead of once in three years as formerly. The five members who should retire would be the two longest on the executive, and the three who had attended the smallest number of committee meetings. Retiring members not to be eligible for re-election. (3) That the chairman and secretary should be appointed by the committee, the former for two years, and the latter for one year, but to be eligible for re-election. This was the substance of the amendments, and after the chairman had explained how they would improve the organisation of the section, and help to bring the whole of the members gradually into touch with the executive, he stated that the new by-laws would come into force in April for the election of the executive, who would take office in November next. After a few remarks from Mr. Crowther, Mr. Tyrer, and the secretary, the by-laws as amended were unanimously agreed to. The first paper on the programme as announced was on "Metallic Compounds of the Phenols," by Mr. A. H. Allen, but he stated that the experiments being at present incomplete, he would merely read the introductory part, giving it the title

"NOTES ON COMMERCIAL CRESYLIC ACID AND ALLIED PRODUCTS."

In a previous paper (THE CHEMIST AND DRUGGIST, September 10, 1887, page 319) Mr. Allen introduced the subject to pharmacists. Since that time he and his assistants have continued to work at it, with the object of finding the simplest method of extracting the cresol compounds from the tar obtained from blast-furnace gases. It is this part which was to have yielded the paper on the metallic compounds of phenols, which, Mr. Allen said, must be of great interest to the chemist. In making phenol from coal tar, the method of treatment in use in several large works in England is to treat the tar with a solution of caustic soda, whereby phenolates are formed; then, by passing carbonic acid through the solution of phenolates, carbonate of sodium is formed and crystallises out from the free phenol. There are several patents for separating phenol by other methods, for instance, Lancaster and Gall's process, and Staveley's process, the latter consisting of treating the tar with lime, whereby the phenols are extracted as calcium phenolates, and re-acting upon this with sodium sulphate, and subsequent decomposition of the sodium phenolate with acid. This, Mr. Allen thought, was a very ingenious process which worked well. He then proceeded to tell the meeting of the process which had been patented by Mr. Robert Angus and himself for the separation of the cresol compounds from blast-furnace tar, which contains from 20 to 30 per cent. of the cresol compounds. In this process the tar is first treated with 0.5 per cent. solution of caustic soda, which is afterwards separated from the oily layer; then the blast-furnace gas, which is rich in carbonic acid, is passed through the soda solution, whereby sodium carbonate is precipitated, leaving a mixture of cresylic acid and its homologues. This is a powerful antiseptic agent, as it contains 4 per cent. of cresols (mostly carbolic acid), 20 per cent. of xylols, and the rest consisting of higher-boiling phenols. The last-named are rather corrosive, but if they are removed by distillation the resulting product is less corrosive than ordinary No. 5 carbolic acid. The following figures derived from a

fractional distillation give a fair idea of the nature of the compound:—

Below 174°, 1 per cent. of water.

174–190° O., 4.4 per cent., consisting mainly of crystallised carbolic acid, the presence of which was proved by crystallisation, and by its bromine absorption, which was 5, as compared with 6 for absolute phenol.

190–195° C., 10 per cent., s.g. 1.0495

195–197.5° C., 21 "

197.5–200° C., 6.6 "

200–202.5° C., 11.2 "

202.5–205° C., 8.6 "

205–207.5° C., 10 " s.g. 1.0355

In addition to noticing the marked falling off in specific gravity as the boiling-point increased, he stated that the solubility in water also decreased. He had also gone into the question of volatility, as it might be urged against the blast-furnace product (called "neosome" commercially) that it evaporates too slowly to be an efficient antiseptic. He had found that when exposed along with Calvert's No. 5 carbolic acid, although the latter evaporated more quickly at first, ultimately the neosome proved to be as effective, and he claimed for the xylols and cresols, in which neosome is rich, strong antiseptic properties.

After a few remarks from the chairman, Mr. Watson Smith, as one who has worked on blast-furnace tar, commented upon the subject. Formerly he thought the neosome contained guaiacol, but he now considered that this was unlikely. Mr. Allen having been thanked for his paper, the remainder of the evening was devoted to a communication by Mr. Watson Smith on "A New Method of Hardening Steel for Projectiles," and one by M. Losanitch on "Bromanil."

MANCHESTER SECTION.

At the third meeting of the session of this section, held last Tuesday night at the rooms of the Manchester Chemical Club—Mr. Ivan Levinstein, the president, in the chair—Mr. W. Younger, F.C.S., read two short papers.

The first was "On the Reduction of Arsenic Acid by Potassium Iodide," in which he said that when hydrochloric acid and potassium iodide are added to a solution of arsenic acid iodine is liberated. This takes place more readily on boiling, and if the boiling he continued for some time the liberated iodine is eliminated, leaving a clear solution. On examining this clear solution it is found that the arsenic acid has been reduced to arsenious acid, which on cooling and neutralising with sodium bicarbonate can then be titrated with standard iodine and the arsenic estimated. The following experiments were made in order to ascertain if the arsenic acid was completely reduced. A measured quantity of a standard solution of arsenious acid was oxidised by the addition of hypochlorite of lime solution, acidified with hydrochloric acid and boiled to expel free chlorine, potassium iodide added, boiled until the solution became clear, cooled, neutralised and titrated, the iodine taken up corresponding with the arsenious acid employed. Again, a measured quantity of a standard solution of arsenious acid was oxidised by titrating with standard iodine, hydrochloric acid added, boiled until the solution became clear, cooled, neutralised, and titrated, the iodine taken up being equal to the arsenious acid employed. The iodine vapour driven off on boiling was absorbed by passing it through two bottles, each bottle containing the same measured quantity of the standard solution of arsenious acid, neutralised with sodium bicarbonate. The contents of the two bottles were then mixed and titrated for the excess of arsenious acid, when it was found that the arsenious acid which had been oxidised by the iodine vapour driven off on boiling was exactly equal to the iodine employed in titrating before boiling, showing that all the iodine had been eliminated. The reaction was as follows:— $\text{AsHO}_3 + 2\text{HCl} + 2\text{KI} = \text{AsHO}_2 + 2\text{KCl} + \text{OH}_2 + \text{I}_2$. Results obtained by this method agreed closely with results obtained by reducing with sulphurous acid. This method has been employed for estimating the arsenic acid in various substances, and has been found to give results closely agreeing with those obtained by the other well-known methods for estimating

arsenic. Nitric acid and nitrates, if present, must be eliminated. The more hydrochloric acid present the sooner the liberated iodine is driven off on boiling. As an excess of potassium iodide is always employed, it is generally found, on cooling, that a further slight liberation of iodine takes place, but this is prevented by the addition of a few c.c.'s of glycerine, which in no way interferes with the working of the method.

The subject of Mr. Younger's second paper was the analysis of Deacon gases, in which he described a method of ascertaining the composition of these gases. The chlorine, hydrochloric acid, moisture, air, and excess of nitrogen are obtained from one aspiration, which is taken by means of an apparatus previously described by the author in his paper in the *Journal of the Society of Chemical Industry*, volume viii., page 88-89. The gases are first drawn through three small bottles about 30 c.c. capacity each, containing oil of vitriol, for the purpose of absorbing the moisture, then through a tube containing arsenious acid, where the chlorine and hydrochloric acid are arrested. An oxygen apparatus yields a reading of the oxygen in the gases contained in the graduated box, which gives by calculation the air, the remainder of the gases in the box being taken as nitrogen. The author indicated certain precautions to be taken, and an aspiration of the Deacon gases was taken which gave the following results:—

	Per cent. by volume
Air	80.50
Chlorine	4.41
Hydrochloric acid	0.06
Moisture	2.46
Excess of nitrogen (by difference) ..	12.57
	100.00

SCOTTISH SECTION.

A meeting of this section was held on Tuesday evening in the Philosophical Institution, Edinburgh. Mr. R. R. Tatlock presided. Dr. J. B. Readman read a paper on "The Manufacture of Phosphorus." At the outset he gave a short sketch of the earlier methods of manufacture. For about a hundred years bone ash had been used as a source of phosphorus, but now native mineral phosphate of lime had taken the place of bone ash in the estimation of the phosphorus manufacturer, owing, no doubt, to the low price at which it could be obtained. From one or other of the phosphates of lime phosphoric acid was prepared. This phosphoric acid was treated in an evaporator until it precipitated its lime. It was then mixed with carbonaceous matter to the extent of 25 per cent. The mixture was dessicated in a retort, and stowed away for distillation. Distillation was effected in small bottle-shaped retorts, and the crude phosphorus which was produced was mahogany-brown in colour. This crude substance was refined by redistillation, or by being treated with sulphuric acid. At the close of his paper Dr. Readman showed how little phosphorus was used in the manufacture of matches by giving the analysis of the amounts in a number of boxes by various manufacturers which had been tested. In these the quantity varied from half a grain to two and a half grains per box. In the discussion which followed a good deal was said as to the erroneous information which was contained in the textbooks regarding the manufacture of phosphorus and other chemicals.

MR. H. N. WARREN makes a useful suggestion in the *Chemical News* regarding the use of magnesium. Both on account of its purity and the speed with which it facilitates reduction, it ranks high among reducing agents. Thus, on account of its freedom from arsenic, no agent is better suited than magnesium for Marsh's test. Its freedom from iron renders it one of the safest reagents for the reduction of ferric salts previous to titration. The speed of reduction is about three times that of zinc, and the absence of both phosphorus and sulphur may also be relied upon. It also possesses other virtues which suggest its freer use in laboratories, especially since it has become so cheap.

THE BOARD OF TRADE AND RAILWAY RATES.

ON Tuesday Mr. Marshall Stevens, one of the executive officers of the Manchester Ship Canal Company, was examined, on behalf of the traders, by Mr. Balfour Browne, Q.C. His evidence occupied the entire day. He did not appear on behalf of the Ship Company, but for the Lancashire and Cheshire Conference, which consisted of the corporations of the cities of Manchester and Chester, 12 county boroughs, 17 other municipal boroughs, 9 local boards, 7 chambers of commerce, and 32 trading associations, representing the entire district. He pointed out that the cotton trade gave employment to 3,000,000 persons in this country as against 300,000 employed by the railway companies, and the Co-operative Grocers' Society had a traffic four or five times as large as the entire goods traffic carried by the Great Northern Railway. He complained that the rates at present charged by the railway companies were in many instances largely in excess of their statutory powers, and that the proposed maximum rates made a considerable further increase. There was a very considerable traffic upon the London and North-Western Railway of "drugs in hampers." He had prepared a table showing the railway rates charged by the company at the time of the passing of the Railway and Canal Act in 1888, the present and proposed classification of the merchandise to which those rates applied; the proposed maximum mileage for conveyance and terminal charges and the proposed inclusive maximum rates; the existing maximum rates together with comparisons between them and the maximum rates proposed, and a comparison between the rates charged and those which would be authorised to cover similar services if the classification of maximum rates now proposed by the North-Western were sanctioned by Parliament. Where cartage or other services had been included in the rates proper deductions had been made. He found that between Manchester and London, 184 miles, for drugs in hampers with a minimum weight of 500 lbs. the actual rate was 35s. 6d., and they were at present included in class 4. It was proposed to raise them to class 5. The proposed maximum rates per ton per mile were, for 20 miles, 5d.; for 40 miles, 4½d.; 60 miles, 4d.; and for distances above 60 miles, 3½d. In addition to the rate, it was now proposed to charge station terminals in large towns of 2s., and in other towns of 1s. 6d.; with service terminals of 3s. 6d. in large towns, and 2s. 6d. in other towns, which would raise the maximum rate to 69s. 8d., the present maximum rate being only 46s. There would consequently be an increase in the proposed as compared with the maximum rates of 23s. 8d., or 51 per cent., and as compared with the actual rate of 34s. 2d., or 96 per cent. From Manchester to Birmingham, 84 miles, the difference would be 43 per cent.; to Liverpool, 32 miles, 160; to Macclesfield, 18 miles, 70; to Oldham, 8 miles, 288; to Sandbach, 26 miles, 61; to Warrington, 16 miles, 139; to Wigan, 18 miles, 85; and to Whitehaven, 132 miles, 51. The largest increases were in the short distance traffic. The effect of the London and North-Western Company's proposals in regard to "smalls," as shown by a comparison of present and proposed charges for a parcel of 1 cwt. of drugs, was to raise the charge from Manchester to London from 2s. 4d. to 6s. 11d., or an increase of 196 per cent.; to Birmingham from 1s. 11d. to 4s. 1d., or 113 per cent.; to Liverpool from 9d. to 2s. 5d., or 222 per cent.; to Macclesfield from 9d. to 1s. 9d., or 133 per cent.; to Oldham from 7d. to 1s. 3d., or 114 per cent.; to Sandbach from 11d. to 2s., or 118 per cent.; to Warrington from 7d. to 1s. 7d., or 171 per cent.; to Wigan from 9d. to 1s. 9d., or 133 per cent.; and to Whitehaven from 2s. 3d. to 5s. 4d., or 137 per cent.

In reply to a question by Lord Balfour of Burleigh, Mr. Stevens said the charge of 2s. 4d. per cwt. for a package of 1 cwt. of drugs from Manchester to London bore no arithmetical proportion to the charge of 35s. 6d. for a minimum weight of 500 lbs., but he had extracted it from the Clearing House returns, in which he found that for a certain distance at a certain weight the charge was arbitrarily fixed at 2s. 4d. per cwt. The largest producer of drugs in Manchester was present and would be able to corroborate his evidence.

Mr. Balfour Brown asked whether, as a matter of fact, the places and rates given in witness's evidence did not refer to the traffic in drugs in hampers, which actually went for the gentleman he had referred to.

Mr. Stevens said that was so. He had also prepared a table of the charges made for returned empties, and they also were charges actually made. Drugs, however, were now raised from the fourth to the fifth class, and the empties would go back in the same class, so that upon a parcel weighing 1 cwt. 2 lbs., from Manchester to Preston, the value of which was 14s. 11d., 5s. would be paid in rates and 2s. 5d. for the returned empty. The present charge for the returned empty was 6d., so that increase would be 1s. 11d., or 383 per cent.

On Wednesday Mr. Stevens was again under examination. He strongly objected to the want of enumeration in the matter of chemicals and dyes. Mr. Harrison, the chief goods manager of the London and North-Western Railway, told the Court that they were included under the generic name of "mordant liquors." For instance, acetate of aluminum was said to be covered in that way. They were all agreed that Class 2, or its equivalent, was the right place for the article, and that it should go wherever "mordant liquors" went; but, if it was only the question of printing that stood in the way, what harm would be done by enumerating it, seeing that, under the present proposals of the railway companies, all unenumerated articles were liable to be charged fifth class, or the highest rates?

Lord Balfour of Burleigh asked whether "mordant liquors," without any explanation, would not be taken to include everything that could possibly be included under the designation?

Mr. Stevens said it might include acetate of aluminum and something also that was not a mordant liquor; but there was always the risk of excluding other articles and putting them in Class 5. How were the traders to know that any particular article was covered by the generic term? Until Mr. Harrison said so the traders were entirely unaware that acetate of aluminum was covered by "mordant liquors." He would give an instance of what had occurred within the past few days in order to show that the interests of the traders could be and were affected by loose classification. Messrs. Robert Gibson & Sons were extensive manufacturers in Manchester of medicated lozenges, and sent consignments to a very large amount all over the country. They arranged for the carriage of their goods not with the railway company, but with Messrs. Thompson & Kay, receiving agents. They had been in the habit of paying the Lancashire and Yorkshire for the carriage of goods from Manchester to Edinburgh 40s. per ton, but while the inquiry had been progressing the company had raised the charge by 10s. per ton, although it was provided that under the Act no advance could take place until after an application to the Board of Trade. Mr. Shaw, of the Lancashire and Yorkshire, on being communicated with, explained that "medicated lozenges" had been hitherto classified as "confectionery," but they were not confectionery, and the classification had been altered to that of "druggists' sundries." Mr. Shaw added that the matter had been considered by all the railway companies in Manchester, and also by the classification committee, and they had come to the conclusion that the proper classification was that of "druggists' sundries." The traders thought that the article had been rightly carried as "confectionery." If the words "medicated lozenges" had appeared in the classification, the rate could not have been raised, and he thought this instance showed the necessity of having all articles specified in the classification in order to prevent the arbitrary raising of the class. The traders were of opinion that power should be reserved to the Board of Trade to include any unenumerated article upon an application being made to them. The conference, in the schedules they had submitted as counter-proposals to those of the railway companies, proposed that there should be included in class 2 *inter alia*:—Alum, alum cake, alum waste, aluminiferous, aluminosilic, sulphate of alumina, bleaching-powder, blanc-fixe (ground barytes with water added for glazing-paper), soda, soda ash, caustic soda, in casks or iron drums; arseniate of soda, carbonate of soda or soda crystals (in casks), bicarbonate of soda in casks; bisulphate of soda, manganate of soda, crude in casks; sulphate

of soda, sulphide of sodium, chloride of calcium, in casks or iron drums; rough oxide of magnesia in cases and casks; sulphate of magnesia, chloride of magnesium, in casks; Epsom salts in casks, bags, or cases; pearl hardening and salt cake. The conference took caustic soda in iron drums as typical of the articles they had enumerated, and grain as the typical articles in the companies' list with which to class them. If the conclusion came to was that "grain" should be in Class C., then all these articles should go into Class C.

Lord Balfour of Burleigh asked how grain and caustic compared so far as the existing classification was concerned?

Mr. Stevens said they were in the same class. Alum and soda were in the Clearing House classification, but they were not enumerated in the proposed classification, and where they were it would take a week to find out. He thought there should be a tribunal appointed by the Board of Trade which should decide, in case of dispute, into which class any particular article should go. For instance, if a trader said that caustic soda should not be classed with grain but with salt, which was carried at a cheaper rate, he should have the right to propose that it should be so classed, but he would have to prove that it was more in alliance with salt than with grain, where it was now classed. It would be found that in ninety-nine cases out of a hundred there would be perfect agreement on the part of the traders as to the proper classification. The onus of proof should be upon the trader where he desired a lower classification, and upon the railway company when a higher classification was wanted.

Sir H. James asked if the Clearing House classification was to be the guide, or were the traders to be at large in making suggestions?

Mr. Stevens thought that the Clearing House classification should be the guide, and the first thing the trader who desired an alteration would do would be to confer with everybody connected with the trade. There were 900 railways in this country, and they managed somehow to act in concert.

Mr. Courtenay Boyle: But there is no general trade association.

Mr. Stevens: No, but since the new schedules of the railway companies were submitted to the Board of Trade there has been practical unanimity among the traders. That is why I am here to-day, representing not only the traders of Lancashire and Cheshire, but those of Devon and Cornwall as well.

Obituary.

MERRETT.—On January 24, Mr. Joseph Hughes Merrett, chemist and druggist, Hyde Park Road, Southsea. Aged 42.

PAINTER.—We learn of the death, on January 15, of Mr. Emlen Painter, one of the leading American pharmacists and, at his death, President of the American Pharmaceutical Association. Mr. Painter was in his 46th year, having been born at Concord, Pa., in 1844. He was a graduate of the Philadelphia College of Pharmacy, and was for many years in partnership with Mr. John Calvert at San Francisco, latterly conducting business on his own account; but he left that part of the States in 1883, and since that time has been in business in New York. The cause of his death was phthisis, which only developed during the past few years. It fell to Mr. Painter to make the arrangements for the meeting of the American Pharmaceutical Association at California, and, unfortunately for him, he did not succeed in pleasing everybody, the result being that, on his return from California, he became much worse, and had to abandon business altogether. Mr. Painter did good work for pharmacy in his lifetime, by individual research, as a member of the National Formulary Committee, and as a leading light of the American Pharmaceutical Association. His death, at a comparatively early age, will be deeply deplored by all who were acquainted with him, and their sympathy will be extended to the widow and five children whom he has left behind.

Trade Notes

MESSRS. HERTZ & COLLINGWOOD have accepted the sole wholesale agency for Machan's revelenta food.

THE UNITED ASBESTOS COMPANY, (LIMITED) announce their removal from 161 Queen Victoria Street to larger premises at 1 Dock House, Billiter Street.

MR. WILLIAM J. SCHIEFFELIN AND MR. HENRY S. CLARK have been admitted as partners of the firm of W. H. Schieffelin & Co., New York. Both gentlemen are sons of the senior partners.

WOODHOUSE & RAWSON UNION (LIMITED) have declared an interim dividend for the half-year ending December 31, 1889, at the rate of 8 per cent. per annum on the preference shares, and of 15 per cent. per annum on the ordinary shares.

THE Farbwerke vorm.: Meister, Lucius & Brüning, of Höchst o/M., Germany, having decided on keeping stock of their principal aniline dyes in London, the agents, Messrs. Rud. Tietz & Co., have removed to 6 and 7 Cross Lane, St. Mary-at-Hill, where Mr. Herrlich, the sole proprietor of the firm, will carry on business in his own name under the style of Otto Herrlich.

"MAGGI," which is a comparatively new liquid extract of beef, is named after the producer, and appears to be a valuable addition to the existing variety of specially prepared food-stuffs. It makes instantly a beef tea of excellent flavour and of nutritious properties. Soups can be made with it entirely or partially, and it is a very useful article to add to gravies. Messrs. Lazenby & Sons and other houses are agents for it.

WE have received a sample of a French speciality which seems to have attained some renown in the treatment of neuralgic complaints. It is the "Pommade Anti-neuralgique," prepared by M. Gröscurm, pharmacien, of Lyons. The active agent is apparently dissolved in chloroform and combined with vaseline, yielding an application of which we do not doubt the efficacy. The retail price of each pot is 2 francs, and it is neatly packed in cardboard cases.

MESSRS. HASSE & Co., of 85 Gracechurch Street, E.C., announce that they have purchased the chemical works of Mr. James M. Seager, at Poplar, and will continue the manufacture of tartaric and citric acid there. The style of the firm will be "Seager's Chemical Works: Hasse & Co., Proprietors." The new proprietors have appointed Messrs. Seager, White & Co., of 85 Gracechurch Street, to be their buying and selling agents.

At a meeting of Directors of W. B. Fordham & Sons (Limited), held on Thursday, it was resolved—subject to final audit—to declare a dividend at the rate of $12\frac{1}{2}$ per cent. per annum, free of income tax, for the second half of the year ending December 31, 1889, making 10 per cent. for the whole year, writing off the usual sums from Premises Account, Plant, Fixtures, &c., and carrying forward 1,721*l.* 0*s.* 2*d.* after writing 1,000*l.* off Goodwill, and carrying 1,000*l.* to Reserve.

ANOTHER French speciality, which, it appears, did not get mentioned in our report of the Paris Exhibition last year is the "Alcool de Menche de Ricqlé's" (Ricqlé's alcoholate of peppermint). The proprietors have sent us a sample, calling attention to our oversight. The fact is that their preparation is, as they say, "too universally known" (and we may add respected) "that it should be necessary to make an eulogy of it." The father of the present members of the firm of Ricqlé's made this article first in 1838, and it has always kept up its reputation. In all French-speaking countries, and in many others, the "Menthe de Ricqlé's" is an established remedy as a stomachic, and for toilet service, as a mouth-wash, and for application in a dilute form to the skin. Peppermint is the prevailing odour and flavour, and this is of fine aroma, but it is a compound of other essences as well, and is a really valuable remedy in cases of flatulence and in choleraic complaints.

WARNER'S SAFE CURE (LIMITED).—According to the *Financial News* certain 'bears' who operated against this company have got caught in a tight corner. That paper

says that, "presuming upon the high premiums at which they were quoted while the prospectus was before the public, several venturesome operators sold blocks of the ordinary shares when at 1*l.* to 2*l.* per share over par. The very 'cute' Yankees who are behind the company knew this, and while they allotted the preference shares very freely, they dealt out the ordinary shares with such a sparing hand that the 'bears' now find themselves cornered. The price has advanced to about 6 premium, and, according to all accounts, will go to double that figure before the 'bears' are allowed to close." Meanwhile "an Inquirer" writes to the *Financial Times* remarking on the sudden cessation of the advertisements of the "Cure" since the company was floated. Even during the height of the influenza panic, he says, "attention was not called to this as a remedy in the daily press."

A PLACE in the very front rank among the many beautiful and instructive catalogues issued by pharmaceutical houses belongs to the Spanish "Catalogo General" published by the Paris drug firm of G. Coutela. A copy of this bulky work was placed upon the stand of the firm at the Paris Exhibition, and was the subject of favourable comment among visitors to the court of pharmaceutical products. The catalogue consists of a large quarto volume of over 700 pages, and contains over 2,000 illustrations of druggists' sundries and other articles offered by the firm. It also contains a complete list of drugs and pharmaceutical preparations, with short materia medica and dispensing notes, and a large section is devoted to the description of South American and other articles of commerce suitable for consignment to France, with the dock charges, customs duties, and conditions of sale at French ports, &c. A catalogue of this kind naturally requires revision frequently. That for 1882, which we have now before us, is the seventh edition.

Gazette.

PARTNERSHIPS DISSOLVED.

Broadhurst & Co., Farnborough, mineral-water manufacturers.
Hancock & Miller, Kettering, mineral-water manufacturers.
Hunter, Waters & Co., Gracechurch Street, chemical brokers.

THE BANKRUPTCY ACT, 1883.

RECEIVING ORDER.

Brooklehurst, Thomas Howard, Bredbury, near Stockport, surgeon, Jan. 31.

FIRST MEETINGS AND PUBLIC EXAMINATIONS.

Heath, J. H., Stratley Road, Willesden, chemist's traveller—Feb. 27.
Pedroza, John William, Sunderland, surgeon—Feb. 10, Official Receiver's office, Sunderland; Feb. 13, Court House, Sunderland.
Tayler, George, Leeds, dentist—Feb. 12, Official Receiver's offices, Leeds; Feb. 25, County Court House, Leeds.

ADJUDICATIONS.

Brooklehurst, Thomas Howard, Bredbury, near Stockport, surgeon.
Pedroza, John William, Sunderland, surgeon.

NOTICE OF DIVIDEND.

M'Kay, Hugh (trading as M'Kay Brothers), Gateshead, mineral-water manufacturer—first and final div. of 3*s.* 1*d.*, Feb. 10, Official Receiver's office, Newcastle-on-Tyne.

ORDER MADE ON APPLICATION FOR DISCHARGE.

Morrow, Timothy, Kearsley, manufacturing chemist—discharge suspended for one calendar month.

PREVENTIVE FOR INFLUENZA.—A good sniffing combination for preventing the influenza is pure carbolic acid, 2 drachms; eucalyptus oil, 1 drachm; strong liquid ammonia, 1 drachm.

TO MAKE RED LINES ON BLUE PRINTS.—To red aniline ink add a few grains of carbonate of potash, which destroys the blue, leaving the red, the latter appearing especially bright compared to the surrounding blue.

Trade Report.

Notice to Retail Buyers:—It should be remembered that the quotations in this section are invariably the lowest net cash prices actually paid for large quantities in bulk. In many cases allowances have to be added before ordinary prices can be ascertained. Frequently goods must be picked and sorted to suit the demands of the retail trade, causing much labour and the accumulation of rejections, not all of which are suitable, even for manufacturing purposes.

It should also be recollected that for many articles the range of quality is very wide.

42 CANNON STREET, E.C., February 6.

BUSINESS has been rather quiet in the drug trade since our last report, but in some of the allied branches, notably the heavy chemical trade, the state of affairs is a very different one, and we hear of rising prices and a very satisfactory volume of business. To-day's drug sales were very heavy, and as the buyers decided by a large majority to bring them to a close to-day, they were not at an end until nearly 5 P.M. The principal alterations established at the auctions and in the private market this week are the following:—Cape and Curaçao aloes, calumba, and vanilla are quotably cheaper, and there was a decided decline in the value of Tonquin musk. Ipecacuanha sold at much higher prices; cardamoms and senna are also rather higher, and for gum elemi a considerable advance was obtained. Buchu leaves, calabar beans, Guinea grains, oils of lemon and sandalwood, jaborandi leaves, and second Calcutta castor oil have improved. Star-anise, ambergris, copaiba, guarana, and Siam benzoin are firm but unchanged. Rhubarb is dull of sale, and croton seed quite neglected. Oils of cubebs and of cloves can be had at lower prices, but for orris root very high quotations come from Italy, and opium and saffron also are still advancing. In chemicals we have to note a decline in citric acid, tartaric acid, and cream of tartar; quicksilver is rather weak, and quinine quiet but unchanged. Benzol is exceedingly firm, sulphate of ammonia, bleaching-powder, soda ash, crystals, caustic soda, nitrate, and English bromide of potash are higher in price. Gambier and cutch are steady, and shellac has recovered since the auctions. Spices, notably cloves, clove-stems, black and white pepper, and pimento are easier, but in oils, cotton seed, rape seed, linseed, and olive oils are rising. Petroleum is quiet and turpentine easier.

THE TRADE OF ANTWERP.—The trade of Antwerp, it appears, is seriously declining. In 1889 there was an absolute decrease in the tonnage of 467 tons, the total tonnage being, in 1889, 3,920,247 tons; and in 1888, 3,920,714 tons. Rotterdam, on the other hand, is making remarkable progress. During the nine years ending with 1889 her trade sprang from 1,681,690 tons to 2,721,479 tons; while the trade of Antwerp only increased in the same period from 2,766,806 tons to 4,355,511 tons. The tonnage entering Antwerp in 1880 exceeded the combined trade of Rotterdam and Amsterdam by 400,000 tons, while now it is 150,000 less. Other towns also have been striving to deprive Antwerp of her trade, notably Bremen, Flushing, Dunkirk, Marseilles, and Bordeaux. In 1880 Antwerp had at her command the entire transit traffic between south and east Germany, northern and eastern France, Switzerland, Austria, England, and America; but it is now being distributed between the ports above named. It appears that excessive dues have driven the shipping from Antwerp harbour. For example, ships of 1,800 tons have to pay in the Scheldt taxes to the amount of 400 francs, which they do not have to pay either at Hamburg or Rotterdam.

THE 3 P.M. 'CHANGE HOUR does not appear to be working altogether satisfactorily. It commenced on Monday, when the attendance at the appointed hour was fairly good; but the closing hour of 3 30 P.M. "sharp," which was from the first insisted upon by the originators of the movement as the vital point of the new arrangement, is not kept quite so punctually as would seem to be necessary. The new meeting hour, it should be explained, applies to the drug trade alone; the members of the oil and heavy chemical trades adhering

to the old hours of 3.45 to about 4.15. As there are a good many agents and dealers whose business compels them to see both the druggists and the oil merchants, these gentlemen have now to tramp the cold flags for over an hour, instead of half an hour as before. Another objection to the innovation is that, whereas formerly the business done on 'Change practically closed the day so far as quotations were concerned, there is some danger now that a good deal of business may be transacted privately after 'Change hours, and that important market alterations may be established which will not become known until the following day. On the other hand, the druggists seem very well satisfied with the innovation, as they say that it gives them more time to go back to their business places and attend to their correspondence; and, after all, it does not seem unreasonable that people who want to sell to the druggists should consider their customers' interests and wishes before their own. But there is, as we have said, a good deal of grumbling, and we are afraid it must be confessed that the putative father of the innovation is somewhat reluctant now to acknowledge the paternity of his offspring.

THE threatened renewal of the dock strike evidently weighed upon the minds of the wholesale druggists this morning when they assembled for the auctions. They had a short preliminary conference, and then, when the broker first on the list was about to commence selling, Mr. Preston called attention to the fact that it was quite possible that the delivery of the goods they intended to buy might be deferred for an unlimited time in consequence of the overhanging dispute. He, therefore, asked the broker to guarantee that, instead of the usual condition of prompt fourteen days after the sale, the prompt should be deferred until a fortnight after delivery of the goods. Mr. R. Barron supported this demand, and the broker readily acceded to it.

THE NEW DRUG SHOWROOM.—The complaints which have been made in various quarters with regard to the insufficient light in the new drug show-room at Crutched Friars have not been without effect. We hear that the dock company have decided to have the greater part of the wood in the roof removed and replaced by glazed windows. The alteration may, perhaps, be completed before the next drug sales.

ACIDS.—*Citric* has been sold at 1s. 3d. per lb. on the spot by second-hand holders. The market remains very dull and quiet. *Oxalic* seems rather better, though the prices have not changed. *Sal acetos* 4½d. to 4¾d. per lb. *Tartaric* again easier for foreign, which is said to have sold at 1s. 2½d., and even at 1s. 2d. per lb. in second hands; *English*, 1s. 2½d., 1s. 3d., though Lawes' brand is still 1s. 3½d. nominally.

ALOES.—A very large supply of *Curaçao* aloes was brought forward at to-day's auctions, the quality being, with very few exceptions, of a very unsatisfactory character. The greater part was forced off at a fresh reduction in price for the lowest grades. A lot of good brown liver was bought in at 80s. per cwt., nominally. Fair brown livery sold at 32s. to 44s., bright hard Capey at 21s. 6d. to 22s. 6d., drossy to fair at 15s. to 17s. 6d., and common grades at from 8s. down to 5s. per cwt. *Cape* aloes are also decidedly easier, a lot of fair hard bright selling at 25s. per cwt.; drossy to fair seconds, 20s. 6d. to 24s. 6d.; and ordinary at 19s. 6d. per cwt. There have at last been some fresh imports of this variety, about 80 cases being landed a few days ago. Three packages good hard yellow *Socotrine* aloes, in skins, sold at 5l.; soft brown, in kegs, at 75s. per cwt. Among the *Curaçao* aloes offered was a lot of 11 small boxes, weighing about 7 or 8 lbs. each, which was disposed of cheaply at 11s. per cwt.

AMBERGRIS.—Several small lots were offered to-day, and the bidding showed an undiminished demand for good quality. One lot of 1½ oz. fine grey, of good flavour, sold with strong competition at 167s. 6d. per oz. For another lot, a lump of 7½ oz., also of good quality, an offer of 160s. was refused. A third parcel sold at 100s., and a fourth at 82s. per oz. One tin of small black pieces, though offered without reserve, could not find a buyer at any price.

AMMONIA SALTS.—*Carbonate*, quiet at 3½*d.* *Sulphate*, rather better demand, and the prices show an improvement. Beckton, 11*l.* 17*s.* 6*d.*, and London, 11*l.* 18*s.* 9*d.*; Hull, 11*l.* 17*s.* 6*d.*; Leith, 11*l.* 16*s.* 3*d.* *Sal ammoniac*, firm at 37*s.* for first and 35*s.* for second quality.

ANISE.—*Russian seed* is still firmly held at 20*s.* to 21*s.* per cwt., but no sales were made to-day at the auctions. Of Chinese *Star-anise* 25 cases of good quality, newly imported, sold with good competition at 105*s.* to 106*s.* per cwt. Reports from China state that it is exceedingly difficult to obtain any supplies even at very high rates, the crop having proved an unusually small one.

ANNATTO.—Thirty-five packages Ceylon *seed* were mostly sold at steady rates—viz., 3½*d.* per lb. for good red, and from 1¾*d.* to 3*d.* for dark and partly mouldy seeds. From Liverpool an improved demand for *Guadaloupe annatto* is reported, with sales at 2½*d.* per lb.; *Cayenne* 1*s.* to 1*s.* 2*d.* per lb.

ANTIMONY.—*Crude Japanese* is offering now at 54*l.* per ton, *regulus* 76*l.* to 78*l.*, according to quality. Antimonial preparations unchanged.

ARSENIC.—Firm at 13*s.* 3*d.* per cwt. for best white powder.

BALSAMS.—*Copaiba.*—The small stock is firmly held by a few owners, who require 2*s.* 9*d.* per lb. for good bright Maranham, while a parcel of Maracaibo is offering at 2*s.* 6*d.* per lb. *Peruvian* balsam quiet and obtainable at 3*s.* 9*d.* per lb., though some holders still ask 4*s.* This was the price named for a parcel shown at to-day's auction. *Tolu* neglected at 1*s.* 4*d.* to 1*s.* 5*d.* per lb. for good quality. At the auctions 5 cases were bought in at 1*s.* 9*d.* per lb. nominally. A parcel of 100 drums *Wood oil* was bought in at 4½*d.* per lb.

BAY RUM.—One hogshead (49 gallons) newly imported from Dominica was bought in to-day, an offer of 3*s.* per gallon (price in bond) being refused.

BENZOL.—Very firm and not unlikely to rise again: 90 per cent., 4*s.*; 50 per cent., 3*s.* 2*d.* to 3*s.* 3*d.*

BLEACHING-POWDER.—The prices have advanced, and from 107*s.* 6*d.* to 110*s.* is now asked on the Tyne, though the demand does not seem to have been particularly brisk this week. Lancashire quotes 5*l.* 5*s.* It is said that the alkali makers in the Widnes district are about to form a combination.

BUCHU.—Of 7 bales offered to-day 4 sold at full prices, 3*d.* per lb. for good green round leaves. For the second lot 2¾*d.* was refused.

CALABAR BEANS.—In Liverpool rather better prices have recently been paid, viz. 9¼*d.* to 9½*d.* per lb.

CALUMBA.—We noticed several good parcels in auction to-day, and most of these were sold at a decline, some lots going very cheaply indeed. Seven bales fine bold yellow washed were bought in at 60*s.* per cwt. nominally. Good sound yellow mixed root sold at 19*s.*; fair, slightly wormy, ditto at 16*s.*; fair pale mixed, but wormy, at 10*s.* 6*d.* to 11*s.* 6*d.*; and dull pickings and ends, 8*s.* to 8*s.* 6*d.* per cwt.

CAMPBOR (CRUDE).—We hear it said that 25 tons Japan camphor sold a few days ago at 145*s.*, "c.i.f." terms, for January shipment, that several unsuccessful attempts have been made to buy at 140*s.* and 142*s.* 6*d.* "c.i.f." during the week, and that there are now no sellers even at the higher quotation. The spot market is also very firm, in spite of some recent arrivals. Mail reports from Hong Kong state that 250 piculs Formosa camphor had arrived there and been shipped to Europe. It is now again asserted that the quantity of camphor used in the manufacture of smokeless powder is exceedingly large, and that it enters into that article to the extent of 10 per cent. of the weight. It must also be considered, that owing to the want of old stocks the manufacturers are now compelled to refine the fresh arrivals, thereby losing about 5 per cent. on the weight.

CAMPBOR (REFINED).—The English refiners still adhere to their price of 1*s.* 8*d.* per lb. for bells, and are very firm at that quotation; foreign offers at 1*s.* 7½*d.*

CANNABIS INDICA.—Eleven bales were offered to-day and all sold at 4½*d.* per lb. for good greenish tops, and 3¾*d.* per lb. (subject) for stalky herb.

CARDAMOMS.—At to-day's auctions the supply was an extremely restricted one, and as there appear to have been a good many inquiries privately at full limits since the last auctions, it was expected that better quotations would be established to-day. As a matter of fact, the few lots sold brought rather higher prices, though there was scarcely any quotable alteration. *Mysore*: good medium long pale, 2*s.*; small ditto, 1*s.*; unclipped, partly split and green, mixed, 11*d.* to 11½*d.*; small pale to specky 10*d.* *Malabar*: fair, medium to small, pale round, 1*s.* 2*d.* *Seed*: 1*s.* 7*d.* to 1*s.* 8*d.* *Wild Ceylon* sold at a high price with good competition, full fine at 2*s.* to 2*s.* 1*d.*, common and lean at from 11*d.* down to 6*d.* per lb. The shipments of cardamoms from Ceylon during the season now in progress, commenced on October 1, 1889, are estimated as likely to reach 300,000 lbs., or about the same as last season. The average of the planters' estimates is 275,000 lbs., the highest being 320,000 lbs., and the lowest 220,000 lbs. The raising of cardamoms continues to be fairly profitable, owing to the non-extension of cultivation on any large scale during the past few years.

CASCARA SAGRADA.—In spite of the bullish reports from America our market remains exceedingly flat, and the nearest quotation is about 65*s.*, "c.i.f." terms, but we do not hear of any business. There are much lower offers, however, from New York for delivery in the course of the summer.

CINCHONA.—We hear of some business privately in *Cuprea* bark at 5*d.* per lb. good quality. At to-day's auctions rather a poor assortment was offered. Some *Calisaya*, very ordinary, flat, papery damaged, sold at 10*d.* to 1*s.* 1*d.* per lb. *Lowa*, partly false mixed broken quill at 1*s.* 4*d.* to 1*s.* 5*d.* per lb. for sound, ordinary at 10*d.* to 1*s.*; long brown *Huanoco* quills at 7*d.* to 10*d.* per lb. Good pale *Maracaibo* bought in at 8*d.* per lb. Several lots of *Red* bark were offered, and sold as usual at high prices; one parcel, however, of good, bold, flat bark, but damaged, was bought in at 11*s.* 6*d.* per lb. The rest, all damaged, brought from 3*s.* 3*d.* to 4*s.* 10*d.* per lb. for rather colourless split and broken quill, and 8*d.* to 10*d.* for ordinary lean quill. At last week's London auctions the manufacturers' bark sold contained the equivalent of 249,000 oz. sulphate of quinine, and realised 14,191*l.* With regard to the probable shipments from Ceylon during the season now in progress (which commenced on October 1, 1889) the *Ceylon Observer* ventures on the following forecast:—"There is ample evidence that Ceylon will never again send the large exports of bark which she did in the past, unless a sudden spurt or revolution on the market should induce an elaborate harvesting from all available trees. On the contrary, for two or three more seasons, the course of our cinchona exports may be expected to be downward. We do not think the total can be below 7,000,000 lbs. for this season, nor below 3,000,000 or 4,000,000 lbs. (chiefly from Uva and the Agras) for many years to come; but the latter figure may be reached by 1892-93. It will not do henceforward therefore to speak of Ceylon as ruling the cinchona market in Europe. Java rather is likely to take that place; but with a steadily increasing consumption there ought to be a good demand at much better prices for all available bark. The highest estimate sent in to us for the current season's exports is 7,500,000, while one is as low as 5,000,000. In estimating, however, for a falling-off of 3,250,000 lbs. on last season's exports, we feel, for various reasons, that we have gone as low as is justifiable." It is now announced that the Dutch Indian Government, in compliance with the request of some Java planters, have resolved that in future the production of Government bark in Java will be limited to 600,000 Amst. lbs. per annum. No reply, however, has been received to the suggestion that the Government should put a minimum unit limit of 15*c.* per ½ kilo. on their bark at the Amsterdam public sales.

CIVET.—Nothing offered at auctions.

COCA LEAVES.—Good, bright green *Truxillo* leaves are quoted at 1*s.* 1*d.* to 1*s.* 2*d.* per lb., and dark green *Huanoco* at 1*s.* 3*d.* per lb. At to-day's sales one large tin of East Indian leaves from Calcutta, very mouldy, brown, and badly harvested, was bought in, no offer being made.

COCOA BUTTER.—At the monthly auctions on Tuesday 355 2-cwt. cases *Cadbury's* were sold at prices ranging from 11½*d.* to 1*s.* 0½*d.*, the closing price being 11½*d.* per lb.

COLOCYNTH.—Large quantities were offered, and 14 cases *Spanish*, partly broken and seedy apple, sold at 1s. 1d. to 1s. 2d. per lb. *Turkey* bought in at 1s. 3d. to 1s. 8d., according to quality.

CONDURANGO.—A parcel of damaged and woody bark was bought in at 10d. per lb.

COPPER (SULPHATE).—Scarce at 24l. 10s. to 25l. on the spot, according to brand. April-May, 24l.

COWHAGE.—Eight tins rather stony were shown, and the price asked for them is 7d. to 8d. per oz.

CREAM OF TARTAR continues to fall slowly. This week we quote best white French crystals at 103s. 6d. to 104s.

CROTON SEED.—The demand for this has quite subsided especially as there have been further arrivals recently. One parcel of 37 bags was bought in without mention of price, and another lot of 25 bags was also bought in at 18s.

CUBEBS.—We note this week an arrival of 30 packages, *viâ* the United States. At the auctions only seven bags stalky mixed cubebs, bold berries, of mace odour, were shown, they are held at 25l. per cwt.

CUTCH has been rather quieter at auction; about 1,300 boxes were bought in at nominal prices. At Liverpool the market also remains firm, and the quotations range from 30s. for *Flag BB*, 29s. 6d. for *Star B*, to 29s. for *Bull*, and 29s. for *RS* in block.

DRAGON'S BLOOD.—Only 7 cases dull brickly fingers were offered, and sold at 95s. per cwt.

ELATERIUM.—Fair quality, is said to be worth 2s. 6d. per oz. and selling moderately well at that figure. At the auctions, 220 oz. *Egyptian*, rather green, mixed, were bought in at 2s. 9d. per oz.

ERGOT OF RYE.—*Spanish* sold at rather lower prices to-day, viz., 1s. 3d. to 1s. 5d. for 17 bags of fair quality. One or two other lots of *Spanish* and *Russian* were bought in at nominal prices.

EUPHORBIA PILULIFERA.—Four small cases good bright *East Indian* herb were bought in at 2s. 6d. per lb. Three other cases not quite so bright sold cheaply at 1s.

FENUGREEK SEED.—Cheaper. *Egyptian* seed has sold at 115s. per cwt. for arrival, and recent imports are now offered below that figure.

GALLS.—*Turkey* blues are still inquired for to some extent and the quotation for fine Bassorah is from 57s. 6d. to 60s. For greens from 52s. 6d. to 55s., and for whites 50s. to 52s. 6d. per cwt. is asked. At to-day's auctions several 100 cases of *Turkey* galls were offered, but only a few damaged lots sold. *China* galls are nominal at 75s. to 76s. per cwt. on the spot, but without business reported.

GAMBIER steady of sale, and rather firmer, though the market has not been much affected by the recent loss of a vessel having a considerable quantity on board for Marseilles. On the spot good *Block* has sold at 27s. 9d. to 28s., and January-February at 27s. 3d. Liverpool very firm, 28s. 6d. per cwt. spot; about 600 packages *Cubes* at auction bought in at 42s.

GAMBOGE.—Solid at full prices at to-day's sales. Good selected loose pipe at 13l. 10s. per cwt., and 16 cases fair run pipe, pretty good fracture, at 10l. 10s. per cwt.

GLYCERINE is reported somewhat firmer, with business in German double distilled, s.g. 1,260, at 64l. per ton.

GUARANA.—The holders now demand 6s. for fair quality.

GUINEA GRAINS.—There has been a strong advance, both here and in Liverpool, and up to 40s. per cwt. is said to have been paid. At to-day's auctions, however, 4 bags of good quality sold at 37s. per cwt.

GUM AMMONIACUM.—Four cases good pale mixed blocky drop sold without reserve at 38s. per cwt., and another lot of dark and stony siftings at 11s. per cwt.

GUM ARABIC.—To-day's auctions included an unusually large supply of *Mogadore* gum, for which the following prices are asked:—Good white sorts, 8l. to 8l. 10s.; fine bold ditto, 9l. to 9l. 10s.; brown to more or less drossy mixed, 5l. to 7l. 15s. Fine bold pale picked gum was bought in at

20l.; small yellowish grain at 15l. Four bags good pale *Cape* gum sold at 75s. to 77s. 6d., and 5 bales pale amber *Senegal* drop at 94s. per cwt. Fresh arrivals of Galam gum have been landed in Liverpool, where the market had been cleared of that variety. *Brown Barbary* is held at full rates, but sales are recorded at 61s. to 63s. per cwt. *Brazilian* gum has been in better request. From Cairo we hear that there have been no arrivals there lately, and that the small stock consists entirely of inferior gums. Arabia has been badly in want of rain during the last year, and the crop turned out very poor. It is expected that this year's arrivals will be very small in comparison with those of previous seasons. The few parcels which arrived in Cairo some time ago from the Soudan have been sold meanwhile, and stocks in Arabic, white friable Kordofan and Ghezireh are *nil*. The last news from the interior speaks of a fresh interruption in the forwarding of goods to the frontier, and most likely nothing will arrive in Egypt for some time to come.

GUM BENZOIN.—*Siam* gum was in good supply to-day, and some lots of excellent quality, which has been wanting for some time, were offered. These were very well competed for, though they sold at less than the valuation. Fine bold loose almond, slightly blocky, at 22l. 5s.; good bright almonds, partly blocky, were bought in at 13l. to 14l. Another lot of bright almondy siftings, block, brought 15l.; woody and drossy siftings, at 7l. 10s.; and 11 cases hard dark brown siftings, in block, sold at 85s. per cwt. Of *Sumatra* gum some sales were also made at steady prices. Good vanilla-flavoured almondy seconds, very slightly false packed, at 8l. 7s. 6d. to 8l. 12s. 6d.; ditto very brown packed, at 7l. 5s. to 7l. 7s. 6d.; fair seconds, partly almondy brown corners, at 7l. 5s. *Palembang* gum: good bright almondy seconds sold at 50s.; fair ditto, at 35s. to 39s.; resiny thirds, at 24s. An odd 2-cwt. lot of sweepings sold at 1s. for the whole lot. A large proportion of this variety remained unsold. Fifteen cases resin from *Bombay* sold at 18s. per cwt.

GUM ELEMI.—The supplies remain very restricted, and a fresh advance of 8s. was established to-day, when 20 cases were sold at 53s. per cwt. for good white gum, and 45s. to 49s. for somewhat dirty mixed. Another lot, including one case of spurious gum, was bought in.

GUM MYRRH.—Without demand, and bought in at the following more or less nominal prices: good to fine pale selected, 7l. to 7l. 10s.; sorts, at 80s.

HONEY.—Several lots were offered to-day and sold fairly well, the competition being rather active. *Italian*, good hard yellow, at 38s.; good pale yellow *Chilian*, at 42s. 6d.; mixed *Spanish*, at 20s. 6d. to 24s. per cwt. In Liverpool the demand both for *Chilian* and *Californian* honey remains very active.

IODINE.—We refer to the present negotiations for the renewal of the convention on another page. The quotation at present is rather nominal, though of course a hand-to-mouth business, both in crude iodine and iodides, at the "old" prices, is still being done.

IPECACUANHA.—The parcels which were recently stated to be about to arrive in London have not turned up yet, and it is now explained that, though ready for shipment in South America, they just missed the last steamer. At to-day's auctions 34 packages were offered, said to be the whole stock held by the importer selling through that broker. At first the trade appeared somewhat unwilling to pay the prices demanded, but the buyers soon gave way, and with active competition an advance of 5d. per lb. was established, the whole parcel being sold at 7s. 4d. to 7s. 6d. for rather woody, and 7s. 7d. for good stout sound; 7s. 3d. to 7s. 7d. for first-class damaged (one fine lot, 7s. 9d. per lb.), and 7s. 4d. to 7s. 7d. per lb. for second-class damaged and mouldy.

JABORANDI LEAVES.—There has been a better demand, with sales at 6½d. per lb.

JALAP.—Two parcels offered at to-day's auctions; 5 bales rather lean, pale *Vera Cruz* sold at 9d. per lb., subject to approval.

LIQUORICE.—At to-day's sales fourteen bales good decorticated *Root* were bought in. Business in *Smyrna Block paste* is rather active, and quotations for this variety run from 30s. to 35s. per cwt.

MORPHIA.—Firm at 6s. for *Crystals*. This price is rather

low as compared with opium, but this is caused by the rather considerable quantity in the possession of second-hand owners.

MUSK (NATURAL).—A fair supply of *Tonquin* musk was offered at to-day's auctions, but the scare among buyers still seems to continue unabated, and there was no demand at all. One owner who sold without reserve had to submit to a decline of about 7s. 6d. per oz. Of 21 caddies *Tonquin* pods, pile I, three sold at 67s. 6d. to 68s. 6d. per oz. for small to bold old-fashioned pods, fairly well trimmed and dry, but rather skinny. Of 16 caddies third pile six were sold, at 33s. 6d. to 34s. 6d. per oz. for damp and badly-trimmed quality. *Trimmings* sold at 1s. 1d. to 1s. 3d. per oz. A quantity of inferior *Grain* musk was bought in, and so also were several packages of Chinese and Russian *Cabardine* and *Yunan* musk.

MUSK SEED.—The recent demand seems to have been satisfied. The two parcels of good flavoured seed offered to-day had to be bought in at 7d. per lb., the best offer obtainable for one of them being 4d.

MUSK (SYNTHETIC).—One of the partners in the French house who are responsible for the introduction of this article is now in this country to push the sale of his product, though the agent here has not received any stock as yet. The new musk will be brought into commerce under the name of "Musc Bauer," and the price is fixed at present at 2,500f. to 3,000f. per kilo. net. Mr. Bauer, the inventor of the musk, was employed as a chemist at the works of M. Kestner, the French senator to whom we referred in our article of last week, and sold his invention to him. The introducers of the new "musk" claim that it is three times stronger than natural musk and that it does not change by keeping. They also say that it entirely replaces ambergris in the developing of perfumes, and that that article is as likely to be affected by its introduction as the natural musk itself. They ascribe the opposition with which they have met in certain quarters to the fact that the best perfumers keep their musk in solution for many years before using it, and it would therefore seriously depreciate the very valuable stocks they hold if they were at once to take up the artificial article. On the other hand it is only fair to say that we have seen letters from a well-known firm of German essential-oil dealers, and from an English chemist, in which the new product is spoken of very unfavourably.

OIL (CASTOR).—Liverpool, after the recent decline, has recovered again to the extent of about $\frac{3}{4}$ d., *Calcutta seconds* being now sold in small quantities at 3 $\frac{3}{4}$ d. per lb. At the sales to-day several parcels were shown and bought in, the price asked for good pale firsts being 4 $\frac{1}{2}$ d. per lb. According to mail reports from Calcutta the prices in India are lower, both for seed and oil.

OIL (COD-LIVER).—There are no statistics to hand yet regarding the new fishery, but the fish seem to come well up to the shore, and to be in good condition. In the western part the catch is good, in the eastern part poor. Comparatively few boats are out yet. Prices for oil remain nominally as last week.

OILS (ESSENTIAL).—*Star-anise* rather quiet at 6s. 2 $\frac{1}{2}$ d. on the spot. We do not hear of any further business. Essential oil of *Almonds* 28s. for the best quality. *Italian oils* are steady, and the price of some brands of *Lemon* has been advanced slightly in Sicily. The quality this season is much above the average. *Oil of Bergamot* is also firmly held. *Cassia* oil is quiet at 3s. 7d. to 3s. 8d. per lb., but the former price would have been accepted for the quantity put up in sale to-day. *Oil of cubeb* is cheaper at 47s. Of *Cinnamon* oil several parcels were offered to-day, and a bid of 1s. 9d. per oz. was refused for fine pale quality, which is held at 2s.; fair quality was sold at 1s. 2d., and another lot of dark common oil at 4 $\frac{1}{2}$ d. per oz. *Cinnamon-leaf oil* is quiet at 2s. per oz.; and 6 baskets *Cajuput*, 25 bottles each, were bought in at 4s. 6d. per bottle. The demand for *Menthol* has almost ceased at present; on the spot 10s. is still nominally asked, but 9s. 9d. would buy, and for one lot to-day a bid of 9s. 6d. could not be obtained at the auctions. *Oil of cloves* is lower, the best English being now 3s. 9d. per lb. The West Indian *Oil of limes* is held at 1s. 9d., and *Bay oil*, also West Indian, at 3s. 11d. Of *Citronella*, 98 cases of good quality in tins were bought in

without mention of price at to-day's sale, and 57 cases, of 36 bottles each, smelling strongly of petroleum, were sold at $\frac{1}{2}$ d. per oz., one lot at $\frac{3}{4}$ d. *Sandal-wood oil*: the prices have advanced as anticipated, and the demand still remains good. Up to 17s. is now asked for the best English distilled oil, and the general expectation is that there will be a further rise. *Fisher's Patehoul* oil, 1s. 4 $\frac{1}{2}$ d. per oz. *Nutmeg oil* is scarce and has been in some request. For pale Java oil 6d. per oz. is asked. Of *Spearmint oil* 4 cases H. G. H. sold cheaply at 8s. per lb., and the rest was bought in.

OIL (MIRBANE).—Best quality, for soap-makers, is held at 7d. per lb., but for certain fancy brands much higher prices than that are quoted.

OPIUM.—The London market is very firm, and the reports from Smyrna still speak of an excited and rising market, with active speculation. Business here has been fairly active, though not so brisk as last week. Shipping opium brings full prices, 15s. 6d. per lb. having been paid for *Malatia* and 14s. 6d. to 15s. per lb. for *Salonica*. In druggists' opium business has ranged between 12s. and 14s. per lb.; *Persian*, up to 13s. 9d. per lb. The prospects are considered in favour of a further rise, and the Smyrna speculators and dealers are said to be buying here, as our market is so much lower than their own.

ORRIS ROOT.—The price in Italy still continues to rise, and speculators have bought up nearly everything that was valuable, but the export demand has so far been small, consumers evidently not being prepared to pay the extreme prices asked, viz. finest *Florentine* 62s., ordinary from 52s. to 58s.; and *Verona root* from 27s. to 36s. f.o.b. Leghorn.

PELLITORY ROOT.—The 8 bales from Algiers, which have been up before, were again shown, and an offer of 25s. was refused.

POTASH SALTS.—The price of Montreal *Potashes* in Liverpool remains at 21s. 6d., but the demand is slow. *Pearlshashes*, nominally, 30s. 9d. *Chlorate of Potash* still firm at 4 $\frac{1}{2}$ d. to 4 $\frac{3}{4}$ d. *Bichromate* scarce at 4d. *Prussiate*, 9 $\frac{1}{2}$ d. to 10 $\frac{1}{2}$ d., according to brand, for yellow. *Saltpetre* nominal; English refined at 21s. to 22s.; German ditto, 18s. 6d. to 19s.; Bengal 17s. 6d.

POTASSIUM BROMIDE.—The English makers have now advanced the quotation for quantities to the same point as the German agents, though the change is only a slight one. The prices at present are from 1s. 6d. to 1s. 6 $\frac{1}{2}$ d. for fair quantities, and from 1s. 5 $\frac{1}{2}$ d. to 1s. 5 $\frac{3}{4}$ d. for lots between 40 and 10 cwt. The combination remains in force, and there is every prospect that prices will remain exceedingly firm. *Iodide*.—The nearest prices which can be quoted are 11s. 6d. to 11s. 9d. per lb., according to quantity. The second-hand parcels which were offering some time ago appear to be out of the market at present.

QUICKSILVER.—The importers' price still remains unaltered at 9l. 15s., but second-hand holders are doing business at 9l. 6s. 6d. net, and the article seems rather quiet. We have received 800 bottles from Italy and 600 from Austria this week.

QUININE.—The business reported this week is comparatively small and limited to about 35,000 oz. of B. and S., and Brunswick, in bulk, at 1s. 3d. per oz. on the spot. It is also said that for June delivery second-hand sales have been made at 1s. 3 $\frac{1}{2}$ d. per oz. The manufacturers are all reported exceedingly busy, and say that they do not care to enter into any further contracts. *Jobst* and *Zimmer's* brands were to-day advanced to 1s. 6d. per oz.

RHUBARB.—Of 114 cases offered to-day, a small quantity only was sold, but without quotable alteration in value: *Shensi*: medium to bold, fair coat, round, half-pinky grey, 2s. 4d.; bold, flat, good fracture, also 2s. 4d.; mixed sizes flat yellow coat, of good fracture, 1s. 10d.; bold, flat pickings, 2s. 1d. *Canton*: medium to bold flat, fair fracture, 1s. 1d.; horny coat, medium and very wormy, 7d. refused.

SAFFRON.—Prices are again higher from Spain this week. At the auctions several lots of partly doubtful and weighted were offered, and all bought in.

SENNA.—680 packages *Tinnevelly* were all sold. At first the competition was somewhat halting, and prices were, slightly lower, but soon the demand became much better,

and the article closes at rather higher prices, say from $\frac{1}{2}d.$ to $\frac{3}{4}d.$ per lb. The assortment was very common in quality. Nearly the whole of it consisted of common discoloured, partly false packed to medium yellow and green mixed leaf, which sold at from $\frac{3}{4}d.$ to $2d.$ per lb. A few bales fair yellowish to good green mixed brought from $3d.$ to $4\frac{1}{2}d.$, and one lot good greenish leaves $6\frac{1}{2}d.$ It was generally thought that the prices would have been lower, as it was expected that the lots offered by one importer would not be bid for because he is said to be offering direct to Continental buyers in small quantities.

SHELLAC.—At the beginning of the week prices were declining still further, though a good many hundred cases changed hands at the call. At the auctions 1,280 cases were offered, but nearly the whole was bought in, there being very little demand, and only about 130 cases sold at a decline of 2s. per cwt. on *Button*. *Second orange* was also 1s. to 1s. 6d. lower, selling at 71s. for cakey common red. *Button*: fine unworked blood, 102s. 6d.; fair thirds to good first, 83s. to 90s. per cwt. After the auctions a better demand set in, and at the call on Wednesday 1,500 cases were sold at some recovery in prices. *TN* February, 73s. 6d.; April, 74s. 6d.; June, 75s. *AC* garnet, February, 70s.; March, 70s. 6d. per cwt. At to-day's call the following quotations were made:—

	Feb.	Mar.	Apr.	May	June
Orange <i>TN</i> , sellers	74/	75/6	75/6	76/6	76/
" buyers	73/	74/	74/6	75/	75/
Garnet <i>AC</i> , sellers	70/3	72/	71/	71/	71/
" buyers	69/	70/	70/6	70/	70/

which shows some slight advance over the quotations in our last report. After the call business was done at 73s. 6d. for February and 75s. 6d. for June delivery.

SODA SALTS.—*Bicarbonate*, firm, at 5l. 15s. to 6l. *Ash*, exceedingly scarce everywhere and dearer, at $1\frac{1}{2}d.$, less 5 per cent., on the Tyne, and $1\frac{3}{4}d.$ in London. *Crystals* also very steady. London, 57s. 6d. to 58s. ex ship, and 2s. more landed terms; Tyne, 48s. 6d. to 50s. *Cautic soda* has been enhanced in price all round, white to 8l. 10s. to 9l., and cream to 8l. *Nitrate* is also firmer and in better request at 8l. 5s. to 8l. 15s., according to quality. The stocks of soda *Crystals* held on the Tyne at the end of last month are given as 2,800 tons, against 3,600 tons on January 31, 1889.

SPICES.—*Arrowroot*: Good, medium, new St. Vincent sold at $2\frac{3}{4}d.$; and common, of old import, at $1\frac{1}{2}d.$ to $1\frac{3}{4}d.$ per lb.; Natal, also of old import, at $2d.$ to $2\frac{1}{2}d.$; while Bermuda arrowroot is selling at 1s. 9d. *Chillies*: At the auctions there were a few lots sold of ordinary Zanzibar at 29s. per cwt. *Cassia lignea* dull of sale at 22s.; at auction 100 cases ordinary quality sold at 21s. *Cloves* are cheaper, both on the spot and for arrival; at auction 600 bales Zanzibar sold at $4\frac{3}{4}d.$ to $5d.$ for medium to good bright; and $5\frac{1}{2}d.$ for fine bold bright. For arrival a good deal of business has been done at lower rates. *Clove-stems* are also cheaper at $1\frac{1}{2}d.$ *Ginger*: Cochin quiet, but unchanged, medium small washed, 19s. 6d.; ditto, part cut, at 21s. to 21s. 6d.; fair old Jamaica, 81s. *Mace*: Fairly steady at 2s. 4d. to 2s. 6d. for good to fine bright West Indian, and 1s. for wild Bombay. *Nutmegs*: Also steady, small sizes in demand. *Black pepper*: Easier for arrivals, and flat on the spot, without any sales at auction. *White pepper*: $\frac{1}{2}d.$ lower for Siam and Singapore; fair Siam $9\frac{1}{2}d.$; good Singapore, 10d. per lb. *Pimento* has sold at slightly easier rates in sale; ordinary to fair at $2\frac{1}{2}d.$ to $3d.$ per lb. *Sago*: Quiet; fine pale small pearl, 15s. 3d. to 15s. 6d. per cwt. *Tapioca*: Dull of sale; flake, common to good Malacca, $1\frac{1}{2}d.$ to $1\frac{3}{4}d.$; ditto Penang, $1\frac{1}{2}d.$ to $1\frac{3}{4}d.$; medium to good pearl, 17s. 6d. to 18s. per cwt.; fine bullets, 20s. 6d. per cwt.

STROPHANTHUS.—The good green hairy seed from the South-East Coast, which has been wanting for a long time, is now again on offer, but the demand does not seem to be particularly brisk; five bags of 50 lbs. each were shown to-day, and bought in at 12s. 6d. per lb.; six packages from West Coast of Africa, 1,728 lbs., were also bought in.

TONQUIN BEANS.—Several lots of *Pará* beans, in the second hand, were offered to-day. Small black beans (*Surinam*) are held at from 4s. to 4s. 6d. per lb.; rather common to fair bold foxy sold at 3s. 1d. to 3s. 8d. per lb.

VANILLA.—270 tins were offered to-day, and all sold at a decline of about 1s. to 2s. per lb. Fair to good slightly crystallised, 4 to $6\frac{1}{2}$ inch, 11s. 6d. to 14s.; $6\frac{1}{2}$ to 8 inch, 14s. to 18s. 6d.; rather sour ditto, 6 to 9 inch, 11s. to 17s. 6d.; rather dry and brownish chocolate, $5\frac{1}{2}$ to $7\frac{1}{2}$ inch, 11s. 6d. to 16s. 6d.; 8 to $8\frac{1}{2}$ inch, 13s. 6d.; ordinary brownish, 7s. to 13s. 6d. per lb.

LONDON DRUG STATISTICS.

THE following figures refer to the stocks of the principal drugs in the port of London on January 31, 1890, and to the imports and deliveries during the whole of 1889, as compared with the preceding year:—

Article	Stocks		Imported		Delivered	
	1890	1889	1890	1889	1890	1889
Aloes ..os & pkgs	9,052	7,324	1,089	604	275	269
" ..gourds	1,310	2,202	—	172	34	18
Anise, Star ..chts	71	139	—	—	—	—
Arrowroot ..cks	10,866	11,115	904	1,359	1,229	1,163
" ..bxs & tins	5,578	7,422	78	40	524	478
Balsams ..cks, &c.	2,184	186	15	—	109	6
Bark (Cinchona), S.American cases	480	—	—	—	2	—
" ..bls & o.	30,737	—	487	—	1,836	—
E.I., Ceylon, and Java ..cks	391	—	1	6,378	13	3,225
" ..bls, &c.	24,800	—	3,417	—	2,693	—
Borax ..cks	398	618	21	—	100	—
Calumba ..	1,845	1,825	30	94	69	113
Camphor ..	422	718	937	—	508	269
Cardamoms ..chts	1,462	617	330	152	191	123
Cococ. Ind. bgs, &c.	163	325	—	—	9	24
Cream of Tartar cks	10	11	—	8	—	10
Cubeba ..bgs	234	90	—	—	75	34
Dragon's Blood cks	133	100	6	35	17	15
Galls, China, &c. os	1,268	1,624	432	148	22	649
Turkey, &c. ..cks	2,972	2,832	102	743	867	578
Gums—						
Ammoniac pkgs	88	122	1	6	4	9
Animi & Copal pkgs	8,576	4,763	1,227	554	2,215	676
Arabic ..	21,753	24,975	2,739	6,141	2,901	2,609
Asafetida ..	392	280	—	—	19	69
Benzoin ..	2,113	1,833	321	103	301	197
Damar ..	5,149	2,919	560	856	591	439
Galbannm ..	57	—	24	—	1	—
Gamboge ..	48	79	9	—	24	14
Guaiacum ..	—	16	—	—	—	—
Kino ..	98	93	—	6	19	—
Kowrie ..tms	1,258	1,701	95	601	184	262
Mastic ..pkgs	27	31	—	—	3	2
Myrrh ..	438	463	21	31	31	64
Olibanum ..	4,467	3,425	953	1,253	225	556
Sandarac ..	445	815	158	142	107	76
Tragacanth ..	7,178	6,443	303	1,055	503	182
Ipecac. cks & bgs	68	38	31	56	145	46
Jalap ..bils	73	87	2	—	—	—
Lac Dye ..chts	5,698	5,857	—	—	1	23
Nux Vomica pkgs	299	1,091	10	—	178	37
Oils—						
*Anise ..os	87	12	53	15	49	11
*Cassia ..	30	24	25	25	23	19
Castor ..cks	386	53	141	21	148	34
" ..cks	4,079	5,900	1,233	159	371	1,267
Cocconut ..tms	2,483	1,141	20	123	154	492
Olive ..cks, &c.	84	337	402	132	337	165
Palm ..tms	25	23	9	9	4	48
†Opium ..chts, &c.	—	1,634	—	88	—	71
Rhubarb ..chts	803	1,047	73	117	19	93
Safflower ..pkgs	456	583	30	—	27	—
Sarsaparilla ..bils	256	326	99	97	118	157
Senna ..bils, &c.	3,753	1,734	869	129	271	283
Shellac, Orange cks, &c.	38,682	45,363	1,567	2,351	3,715	3,474
Garnet ..	8,101	14,559	—	—	1,791	650
Button ..	6,193	7,338	918	312	880	931
Total ..cheats	52,981	67,060	2,485	2,663	6,356	5,105
Sticklac ..chts, &c.	2,862	3,566	—	50	147	310
Gambier ..tms	603	1,364	550	1,109	630	932
Gutch ..	2,469	2,909	1	109	112	219
Turmeric ..	2,534	3,174	—	20	34	43
Vermillion, ochts, &c.	19	29	16	29	16	12
Wax, bees' ..bils & srns	621	519	56	85	209	92
" ..oks & cs	946	1,319	147	501	154	313
" ..cakes	24	17	—	—	—	—
" Japan ..pkgs	1,625	1,302	25	—	45	154

* The stocks of anise and cassia oils lying at Smith's Wharf and Brewer's Quay are not included in this return.

† No returns of opium have been made this month.



Memoranda for Correspondents.

Always send your proper name and address: we do not publish them unless you wish: if you do not, please use a distinctive nom-de-plume.

Write on one side of the paper only; and devote a separate piece of paper to each query if you ask more than one, or if you are writing about other matters at the same time.

If you send us newspapers, please mark what you wish us to read.

Ask us anything of pharmaceutical interest: we shall do our best to reply.

Before writing for formulæ consult the last volume, if you have it.

Letters, queries, &c. will be attended to in the order received.

Administration of Nitrous Oxide Gas.

SIR,—Our friend "Heder" has reopened the discussion of a very interesting subject to those of us who practise dentistry.

In administering gas I am sure that a few practical lessons at a hospital will give more confidence to a beginner than hours of reading, but many are unable to enjoy such a boon. Anaesthetists do not as a rule depend on any one sign of anaesthesia to guide them as to the quantity of gas to administer; but the chief indications are the insensibility of the conjunctiva to touch, stertorous breathing, pulsations at wrist or temple, and helplessness of hand when lifted. During administrations conversation with anyone present should be cautiously indulged in.

With respect to guards in extractions, I think they are comparatively little used, and I am inclined to believe a good deal of the escape of teeth from forceps is owing to the large size of the instrument, which is generally much larger than is at all necessary. My instruments are only about two-thirds the size of those I see in the possession of other dentists, and were made specially for me to the pattern of those in use by a dental lecturer in large practice. The blades adapt themselves beautifully to the contour of almost any tooth I wish to operate on, and, being of small make, cause less pain in pressing home previous to the tug of war. The bicusps are generally the guilty creatures that cause anxiety in this respect.

From time to time we have had recommended to us formulæ for solutions for producing local anaesthesia in teeth extractions, but in my hands they have been "vanity and vexation of spirit"; so have the preparations which are advertised in the dental journals. The following has given the best results, especially for the extraction of stumps, the objection being its powerful odour:—

Æther pur.	..	..	..	..	3vj.
Menthol	..	..	..	..	3iv.
Ext. cannab. ind.	..	..	..	..	gr. lxxx.
Ol. menth. pip.	..	..	..	..	3j.

Misce.

I used it this morning in the extraction of a broken-down first upper molar, and though it had to be extracted in two pieces, not the slightest pain was experienced. Such was the testimony of my patient, and he was the better judge.

Can any of the readers of this journal verify the following statement which has been made to me on good authority? The public individuals who go about the country extracting teeth free of charge have so many cases to attend to they do not clean the instruments but use them wet with the blood, &c., of a previous case. If it be so, what a chance for some hard-up patient to claim heavy damages!

ATTRACTION. (237/65.)

Reform of the Pharmaceutical Society.

SIR,—I am induced to believe that our members are at length beginning to bestir themselves to bring about a much needed and complete reorganisation of this—alas! must we confess it?—decaying Society, inasmuch as in response to a

circular sent out in this part of the kingdom many most encouraging replies and offers of help have been received.

It is a great misfortune that this necessary movement has been so long delayed, as many members have left it to its fate during the last few years, believing its improvement to be quite hopeless, and to my own knowledge several old members in this town have left off subscribing for this reason. One writes, "After twenty years' membership I last year arrived at the conclusion that my guinea was more useful to me than my connection with the Society. It can hardly be claimed that it represents the trade, and it is quite useless in helping us to gain a professional crust."

However, as another writes, "The time has come when we must either end it or mend it," and it would be a sad reproach if we had not energy enough amongst us to do the latter. So wake up, ye pharmaceutical Rip Van Winkles, from your drowsy stupor, and let it not again be said that the average chemist is the most apathetic, narrow-minded creature in existence!

Efforts are now being made to induce some representative men in favour of sweeping reforms to come out to the Council in May next, and I would urgently appeal to all voters and others waiting to join an improved Pharmaceutical Society to interest themselves in their candidature, and canvass amongst the large number who for lack of interest and other reasons do not usually vote, and secure their votes for these candidates. Make an end once and for all of that lack of interest in the Society's affairs so prevalent in our midst, and rise every man among you and do your duty, for thus, and thus only, can we ever hope to build up a truly representative, progressive, and satisfactory Society.

The requirements are so numerous that I must on this occasion forbear from even enumerating them, not to trespass unduly on your space, and conclude by thanking you in anticipation for inserting this letter, and trusting to receive the strong support of many of your readers in this effort to create a large and united Pharmaceutical Society.

I remain, yours faithfully,

65 St. Mary St., Cardiff.

ALFRED COLEMAN, Ph.C.

Advances in Patents.

SIR,—Advances in patents are at present quite the order of the day. Proprietors seem to think when goods have got a hold in the market that a 5, 10 or 20 per cent. advance will not injure the trade.

Whether they are right is, I think, open to question, and sometimes it is not bad policy to let well alone. I know that the numerous advances cause much inconvenience and trouble to those who have their price-lists and circulars arranged, and are also a source of much annoyance and irritation to customers, who are very ready to consider the advance a mere invention of the seller. Then perhaps some one has a stock and does not put on the advance for some time, thus causing disarrangement and annoyance all round, or it happens sometimes a chemist may in the pressure of business overlook a certain advance and omit to revise his price, of course creating in the minds of customers the impression that the others are overcharging. Every advance in patents will, I think, tend to further extend chemists' business in their own preparations. I know at present several who are working this department with considerable and increasing success.

In one sense it is a matter of indifference to the trade what prices the patent medicine houses may dictate, but I would venture to suggest to those who contemplate advances to please act quickly, so that those traders who issue lists may not have to be constantly changing. Yours, &c.,

February 3.

ALERT. (238/27.)

Etching on Glass.

SIR,—In your issue of December 7, 1889, information was requested as to white hydrofluoric acid for glass etching, to which I replied on December 14, page 845. Since then I have come across the following, which I have used with considerable success. Commercial hydrofluoric acid is placed in a papier-mâché tray, and only about $\frac{1}{2}$ inch of depth of acid to allow of effervescence; powdered crystals of carbonate of

soda are now stirred into the acid until the mixture becomes thickish and bangs like snow on the stirrer, which should be wood or indiarubber. The acid is only partly neutralised, and the resulting white mass is strongly acid. It is, of course, advisable to conduct this operation out of doors, and care should be exercised not to breathe the gases given off, which are apt to cause cough and lung trouble. The pasty mass, which is a mixture of fluoride of sodium and hydrofluoric acid, is now diluted with water and poured on the glass, and allowed to remain two hours. The exact dilution is a matter of trial, depending on two factors, one the strength of the original acid, the other the hardness of the glass. But from five to ten times the volume of water is the usual proportion. It is advisable to make a trial etching, by using the smaller proportion of water first, and after two hours' washing off the acid the grain should be very close and fine; if the grain is coarse further dilution is required.

E. J. W. (237/30.)

Strange Influenza.

SIR,—As influenza, its remedies and prevention, are still a matter of discussion in your columns, a few words on this subject may not yet be too late. In our works here the hands employed in the preparation of antiseptics, essential oils, and living, so to speak, in an atmosphere of essential oils, were the only ones attacked. The writer was the first although his laboratory was at the time reeking with thymol. The next man was employed in the pot. iodid. and resublimed iodine department. Finally two stillmen, engaged only in drawing essential oils, were stricken down, whilst the remainder of the staff were not touched.

Why we should particularly have been selected under these conditions would still be a mystery were it not for the fact that predisposition may have something to do with it, and such predisposition existed in all the four cases mentioned.

I quite agree with your correspondent, Mr. G. J. Thomas, that tr. quinae ammon. does not form "balls of quinine" on dilution—turbidity or, at most, flocculence being all that is visible. Probably your informant had made the dilution a long while before use.

Yours truly,

"Mitre" Chemical Works, Bow, E.

C. A. SERRE.

January 31.

A Curious Order.

SIR,—Twice within a week I have had to send out a foraging expedition to capture a few common blackbeetles. A medical man was anxious to use them for an invalid, and was rather troubled by the delay I experienced in finding the animals.

I read in the *Pharm. Universalis* that *Blatta* was used for various purposes; and I shall be interested in learning how often the insect is wanted for medical use.

Yours truly,

HEDER. (239/22.)

Surgery in the Pharmacy.

SIR,—Much sympathy will be felt no doubt for "F. W. U." by his *confrères* in the awkward and unprofitable dilemma he found himself in as the result of his surgical operation. I believe our medical contemporaries advise the pugnacious individuals to make capital out of our unsuccessful cases. I have wondered what would have been my lot under the following circumstance, which happened about twelve years ago, had I operated myself.

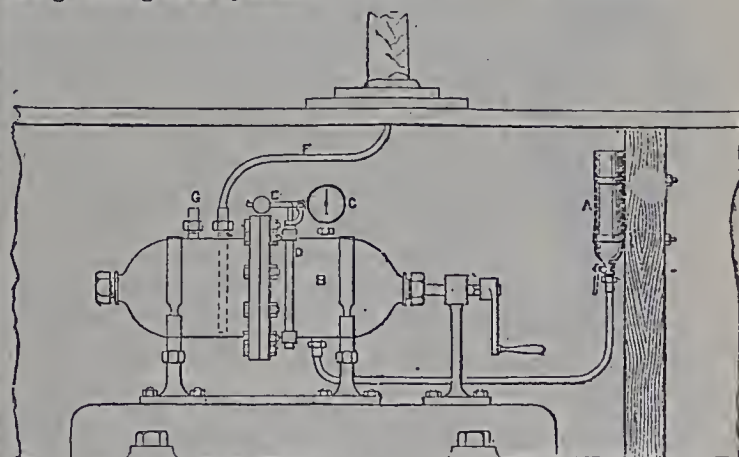
A publican came to my shop having the artery severed at the wrist through the bursting of a ginger-beer bottle. I deemed it advisable to call in a doctor, who instructed me to apply cork and pad to palm of hand, and bind it tightly, whilst he applied a tourniquet to the upper part of arm. He was then driven to a hospital some miles away, and on the surgeon seeing what was done, became exasperated and wrote the doctor a stinging letter. Any certificated St. John Ambulance man would know better than that, and so should I now.

ATTRACTION.

The Use of Liquefied Carbonic Acid Gas for Aërating Waters.

Messrs. Barnett & Foster send us some useful comments on the proposals now being put forward by some companies who are bringing before the public a so-called novel means of aërating waters at an absurdly small cost—something under 1*l.* per dozen. Messrs. Barnett & Foster, as manufacturers themselves, are, of course, interested parties; but against this disadvantage must be balanced the important consideration that, as practical men, they know all about what they are writing on, and their comments cannot fail to be of interest to the many chemists who make aërated waters, or who are thinking of making them. They say first that the idea of using liquefied carbonic acid gas (or, as it is called, natural gas) is not new. In their catalogue of 1875 they showed the drawing of a contrivance, for use with a counter fountain, for serving soda water on draught, and with it they described a small filling-machine for Codd's bottles at a cost of 3*l.* 10*s.* Besides the schemes put forward by the Eiffel Company and the Volcanic Aëration Company, there are two others claiming to have such machinery, and all dependent upon the liquefied carbonic acid gas. At present, Messrs. Barnett & Foster say, it costs considerably more to manufacture soda water by the liquefied gas (about three times as much), as compared with the manufacture from the well-known system of mixing carbonates with sulphuric acid. They proceed:—"Concerning the purity of the so-called natural carbonic acid gas, we must remark that this is very questionable indeed, and we feel confident in saying that where a proper gas generator and good materials are used, the carbonic acid gas evolved by the latter process (which, by the way, is in use by all the first-class mineral-water makers in England) will excel the quality and purity of the natural gas. In fact, we know many of the largest and well-known mineral-water makers who have tried this natural gas for the purpose of making their various mineral waters, but they had to discontinue the use thereof, as they found it imparted an unpleasant flavour to their mineral waters."

Subjoined is the sketch and description of the arrangement proposed, and manufactured by Messrs. Barnett & Foster, and figured in their catalogue fifteen years. The price stated for the bottle of gas was 5*s.*, and this was said to be sufficient to charge a 10-gallon cylinder.



SHOWING CYLINDER FIXED UNDER COUNTER, FOR SUPPLYING A FOUNTAIN, THE BOTTLE OF GAS BEING CONNECTED BY A TIN PIPE.

A—Bottle of compressed liquefied carbonic acid gas; this can be easily detached when empty, and a fresh one substituted.

B—Copper cylinder.

C—Dial pressure indicator. D—Water gauge. E—Safety valve.

F—Tin pipe to fountain.

G—Connection for charging cylinder with water, or it may be used for supplying another fountain, or for connecting a small filling machine, for filling Codd's bottles under the counter.

Our correspondents give besides a sketch of a counter fountain, which they have shown in their catalogues for years, but they remark that they do not think publicans will, to any great extent, manufacture their own mineral waters, even with the immense

temptations held out to them in the circular issued by one of the companies, because if they make to any large extent, then they must have all the appliances of a well-ordered mineral-water factory beyond the aerating machine, such as steam boiler for hot water, for bottle washing, syrup making, &c., which mean, to make it remunerative, personal time, trouble, and expense. And for a small trade it will probably pay him better to buy his stock from week to week as he does now. But, Messrs. Barnett & Foster add, "we have nothing to say against the soda-water fountain. This is an institution distinct from the bottling trade, and is in every chemist's and restaurateur's of the slightest pretensions in the United States, and there is no reason why it should not be more used in the United Kingdom. No more convenient way of supplying the cylinders for these counter fountains can be conceived than with the liquefied carbonic acid gas; this must be self-evident to the most uninitiated, as instead of carting the cylinder of aerated water to the mineral-water machine, everything is close and handy in the shape of the steel bottle of compressed gas. The cylinder should be a fixture, and water laid on to it, the compressed gas vessel containing enough to charge the cylinder many times, being the only portable part. The steel vessels now made are larger than those made fifteen years ago, and the size of the vessel holding the gas matters not. The length of pipe from the cylinder to counter-fountain may be lengthened if desired, in fact, we fixed a cylinder in a cellar of a large restaurant some years ago, and the pipe went through to the floor above. In the cellar was fixed the cylinder, with a small hand-pump to force water into the cylinder as drawn off, and the steel vessel of gas on the floor. The cylinder was fitted with water and pressure gauges and an agitator, so that very few turns only were required, as the gas, being icy cold, is at once taken up by the water. This, arranged fifteen years ago, then, is, as near as possible, what is flaunted as a new and grand invention. We can see no reason for a claim for patent in this scheme, for it is open to the world to make and use such an invention as here set forth without patent fees, royalties, or such-like expensive luxuries."

Regarding the fountain, they say the idea of filling a bottle first from the outlet cock of fountain is very old, and many in the trade may remember a stoutly-made bottle used for this purpose as shown in the drawing; in fact, a soda-water bottle with a foot, and holding about the same quantity. The glass was very thick, and no wire covering was required in case of bursting. One of these identical bottles they have at present in their show-room. It was necessary, when aerated water was drawn from the old-fashioned fountain, to first fill a bottle of this kind, because, if the aerated water comes out with a rush from a small orifice, a sudden expansion must take place, which immediately releases the gas, while the water, being more solid, falls into the open glass by its own gravity, and a very flat and rapid drink is the result. It is well known that you cannot get so sharp and pungent a water from a syphon as you can from a bottle, for the reason explained above. But they say by their improved soda-water fountain they did away with the necessity of this intermediate bottle, and they cannot conceive why such a retrograde movement has been introduced by one of the companies of drawing into a bottle first, for of course it is no invention, but merely an obsolete use or system revived.

In conclusion, they say, "we do not in the least desire to disparage the use of the liquefied gas for any purpose, and we believe it has a great future before it when it can be supplied cheaper, or as cheap as the trade can manufacture their own. As for the 'natural' gas being purer, this is all fudge, as pure carbonic acid gas, whether made from any material, is the same, and both are subject to being impure unless care is used in the manufacture of the one, and collection, storage, and pumping of the other."

We are, sir, yours faithfully,

BARNETT & FOSTER,

Mineral-water engineers.

"Niagara" Works, Eagle Wharf Road, London, N.

DISPENSING NOTES.

The opinions of practical readers are invited on subjects discussed under this heading.

Bism. Carb. and Inf. Rosæ Acid.

SIR,—In reference to the question asked by "Thescus" in the "Dispensing Notes" of January 18, I find that theoretically there is not sufficient real sulphuric acid present in the whole of the inf. rosæ ordered in the prescription to decompose all the oxycarbonate of bismuth, and the dilution is so great that any action likely to occur is retarded.

I dispensed the mixture in the proportions given by your correspondent, and no decomposition was noticeable. After standing about twelve hours I decanted the liquid, added 2 or 3 drops of hydrochloric acid to a portion of the sediment, and a brisk effervescence was seen.

Yours truly,

Sunderland.

J. H. E. (235/63.)

Antipyrin and Nitrous Acid.

235/60. J. B.—If you refer to THE CHEMIST AND DRUGGIST of March 23, 1889, page 402, you will find the statement that the decomposition product resulting from the action of spirit of nitrous ether on antipyrin is not poisonous. Nevertheless, it is desirable to call the attention of the prescriber to the fact that the bodies are incompatible. Although neutral spirit of nitrous ether does not affect antipyrin, when in aqueous mixture the spirit rapidly becomes acid.

A Dangerous Prescription.

236/22. Assistant asks, What in your opinion would be the proper course with regard to the following prescription? I could not consult prescriber:—

Liq. arsenicalis	3iss
Liq. strychninæ	3ij.
Liq. potassæ	3ij.
Aquæ ad.	3iij.

M.

One teaspoonful in water twice a day after food.

[The danger in this case is the possibility of the patient getting most of the strychnine in the last dose. To prevent this as far as possible mix the strychnine solution with 2 drachms of acacia mucilage and 2 oz. of water. Mix the rest separately, and pour the alkaline solution in that of the alkaloid. Label prominently, "Shake the bottle," and mention the fact to the patient.]

The Second Ingredient

in the following prescription is unknown to the dispenser to whom it has been submitted for compounding. What is it?

Glycerin 3iv
Tinct. Bell. ad. 3iij

The directions are: Take two teaspoonfuls in a tablespoon of warm milk three or four times daily.

233/54. X. Y. Z. would like to know what should be dispensed for "Liq. Hamamelis" in a prescription for a lotion.

26/190. W. H. D.—Dispense the prescription as written, a 10-oz. mixture.

234/10. B. H. A.—It is quite safe to add salicylic acid to dissolve the cserine. A lotion with little bits of the alkaloid floating in it is not a desirable thing to dispense.

LEGAL QUERIES.

239/7. *Bullock*.—The sale of any tincture of aconite, whether called homœopathic or not, is the sale of a poison recognised by law, and must be so treated. But the presence of the poison must be admitted or proved before conviction, and it is not likely that analytical proof could be procured of its presence in one of the usual homœopathic dilutions.

238/55. *Alchemist*.—You may use your design as a trade mark without registration, but you could not bring any action for its infringement (as a trade mark) without having previously registered it.

238/38. *Haster*.—We do not see that your label or hand-bill infringes the trade-mark rights of the firm whose labels and circulars you send us, but this opinion might be modified if it should appear that you put up your article in a style exactly or nearly similar to theirs.

239/32. *Enquirer*.—Of course co-operative societies and drug companies are just as amenable to the Sale of Food and Drugs Act as any other traders. You cannot have read the last few numbers of this journal, or you would not ask the question.

239/27. *Lynn*.—We should say the pick-me-up and chilblain liniment labels might be regarded as rendering the preparations liable to duty, but not the corn solvent. But why not get an authoritative opinion from Somerset House?

237/28. *D. H. W.*—The county court judge will most likely be influenced by what you wrote when you sent the cheque. If you made it clear that the amount was tendered "in settlement," the acceptance of the cheque without demur would most likely be conclusive; but if you said nothing of this kind your opponents may convince the judge that they took the cheque only on account, and then the decision will depend on the merits of the case.

239/71. *Bon Accord*.—The actions reported last year went to show that the words referred to were not capable of being acquired by any firm exclusively; but they must not be used in such a way as to be calculated to induce the belief that a customer is buying another maker's article.

MISCELLANEOUS INQUIRIES.

A large number of correspondents ask us for formulae and other information already published in this journal. It is not fair to more careful readers that we should frequently repeat such information, and so long as the back numbers containing the formulae or replies required are in print we must decline to do so. Back numbers of our weekly issue can be obtained from the publisher at 4d. each.

Correspondents who have made inquiries regarding the following subjects will find the information in the numbers indicated.

238/13. *Castigo*.—*Lin. Plumbi Lact. Co.*—See THE CHEMIST AND DRUGGIST, March 17, 1888, page 381.

237/71. *Café*.—*Mud Fever*.—Notes on and formulae for treatment were given on March 17, 1888, page 371.

199/4. *Omega*.—(1) *Ginger Champagne Essence*.—Soluble essence of ginger, 10 oz.; essence of pineapple, 2 drachms; tincture of fresh lemon-peel, 1 oz.; essence of vanilla, 2 drachms; tincture of capsicum, 2 drachms; tincture of saffron, 2 drachms. Mix. (2) *Lemonade Essence*.—If you can procure lemons cheaply you can make a satisfactory essence from the peel. Rasp it, and use 5 oz. to 1 pint, the menstruum being rectified spirit 4 parts, and

water 3 parts. From 1 to 2 oz. of these essences may be used to 1 gallon of syrup. To your third and fourth questions we can give no reply. (5) *Spirit for Diluting Perfumes*.—S.V.R., 60 o. p., 17 oz.; water, 3 oz. Mix.

222/16. *J. Green & Co.*—Arsenic is recommended for removing Warts from Horses, and doubtless the yellow sulphide would prove as efficacious for this purpose as arsenious acid. A suitable preparation would be:—Yellow sulphuret of arsenic, 1 part; starch, 2 parts; lard, 7 parts. Reduce the sulphuret to fine powder, mix well with the starch, and add the lard.

227/17. *Attraction*.—(1) Ten grains is the usual adult dose of antipyrin for neuralgia. You must judge for yourself whether the antipyrin will be safe or not. It sometimes, though rarely, affects injuriously those who have a weak heart. (2) It is the inodorous stearoptene of oil of anise which crystallises out from the spirituous solution by exposure to the cold. You cannot prevent it doing so.

227/18. *Boston*.—(1) *Pancreatized Fat*.—You will find, in the "Extra Pharmacopœia," a brief abstract of Dr. Dobell's process for pancreatising fat. This is done by mixing and pounding the pancreas of the pig with lard and water, straining, and exhausting the strained substance with ether. From the ethereal solution the pancreatised fat is obtained by evaporation. You might also "digest" the fat by treating it with pancreatic powder, such as zymine, in the proportion of 4 grains to the ounce of lard. The addition of a little bicarbonate of soda would be an advantage. Fats do not digest as other kinds of food do. The function of the pancreas is to supply the food with fat-emulsifying material, so that when the food reaches the intestines the fat is in a state of fine division, and in this condition it passes into the system through ducts provided for that purpose. (2) *Orange Wine*.—Make a thin syrup of 23 lbs. of sugar with 10 gallons of water; boil and clarify with the whites of six eggs. Pour the boiling liquor upon the peel of 100 oranges, add the juice of the oranges and 6 oz. of yeast. Allow to ferment for three or four days, then strain into a barrel, bung loosely, and, after a month, add 2½ pints of brandy. In three months the wine is sufficiently matured. (3) *M. Chassaing* (6 Avenue Victoria, Paris) is the author of a small handbook on the manufacture, &c., of pepsin. It is printed in French. This is the best book we know of.

227/23. *J. P.*—Have you tried sponging the catgut with solution of strychnine? This might prevent mice eating it.

227/41. *C. W.*—We shall be glad to submit your query when you tell us that you have tried to make the liniment, what plan you adopted, proportions, and wherein you failed.

227/49. *Subscriber* (Grimsby).—Drinks of the Zoedone character are made with syrup of phosphate of iron. You may flavour with lemon and pineapple.

227/51. *M. R. & Son*.—See our Educational number, September 27, 1889. (2) The inhalation solution given on page 97 would suit you.

228/10. *Mel*.—You should read up back numbers to get full information regarding blackheads. Be absolutely cleanly in person, and take a tonic, such as Easton's syrup.

228/40. *Dens*.—You ask for information which is only known to the manufacturers, which they have only acquired after laborious experiment and great expensio, and which they would not part with without sufficient compensation. We can only give you general information, and that, evidently, is not what you want.

228/63. *Quicksilver*.—We do not know anything better or more cleanly than Brooke's soap for cleaning window-brasses. Have you tried it, or oxalic acid (1 oz. to 30 oz. of water)?

229/7. *J. A.*—There have been hints on starching in recent issues.

229/62. *E. B. B.* asks "If the Odour of Paraffin for burning purposes can be destroyed or hid in any way, inexpensively and without injuring linen fabric." The odour is *sui generis* and cannot be destroyed. Citronella oil covers it slightly, but that is one bad odour covering another.

230/61. *C. U.*—Who are you?

230/63. *H. Edwards*.—Sulphonol is di-ethyl-sulphonic-di-methyl methane $(CH_3)_2C(SO_2)_2(C_2H_5)_2$. We have not heard of "solar."

230/71. *Somerset*.—Chromic Acid for Batteries.—The solution of bichromate of potash and sulphuric acid is so called.

230/72. *H. H.*—Acetum Ipecacuanhæ, B.P.C.—This is made by macerating 1 oz. of No. 20 powdered ipecacuanha in 1 oz. of acetic acid for twenty-four hours; then packing in a percolator, and percolating with another ounce of the acid diluted with 10 oz. of water, finishing by percolating with water to 20 oz.

230/29. *G. S. F.*—You could not obtain any situation in a pharmacy in Germany unless you had passed the (German) examination required by law. You cannot even be an apprentice in an apotheker without your certificate of having passed a certain examination. You might possibly find a place in one of the towns where English visitors congregate where you would be received into the house, and where your assistance in talking to customers, &c., would be taken as an equivalent for your board. Or you might possibly find a situation in some Swiss pharmacy, or in some Hamburg wholesale drug house.

231/70. *R. S. H.*—Razor-strop Paste.—A Canadian correspondent sent us the following about two years ago:—

	Oz.
Finely-powdered emery	1
Plumbago	1
Jewellers' rouge	$\frac{1}{2}$
Suet	1
Yellow wax	1

Mix.

256/36. *Pet.*—We have not examined the coating of Holloway's pills, and are unable to say what it is composed of.

29/190. *E. & Co.*—The apothecaries' ounce (480 grains) is generally used in compounding photographic formulæ.

233/11. *J. Robertson*.—For formulæ for red colour for show-bottles see our issues for August and September last. *Green*.—A solution of nitrate of copper in water acidified with nitric acid. A very beautiful colour is made from sulphate of nickel, 4 oz. to 1 gallon of water. A number of formulæ are given in *THE CHEMISTS' AND DRUGGISTS' DIARY*, 1889.

Anonymous Correspondents.—We have passed over a number of letters from correspondents who give neither names nor addresses. We again repeat that such communications are not attended to.

233/57. *Cassia Acutifolia*.—We presume the object of your note is rather to discredit the chemists referred to than to acquire information. We therefore do not print it.

716/94. *C.I.F.*—The letters "c.i.f." after quotations in our market report indicate that the price of the article so quoted is to be understood "cost, insurance, freight," *i.e.* comprises the cost of the article *plus* the freight and the insurance to a certain port—in our case the port of London, unless any other port is specially mentioned. For instance, in quoting wintergreen oil at 8s. 5d. to 8s. 6d. per lb., "c.i.f.," we mean that the buyer would have to pay all charges for landing the consignment in London, and that the usual London market conditions and allowances are not included in the price. The difference between the "c.i.f." quotation and the "London terms" price depends, of course, altogether upon the article.

231/90. *G. T. E.*—Your **Battery Solution** is a little weaker than usual. The proportions generally used are:—Bichromate of potash, 6 oz.; sulphuric acid, 5 oz.; water, 48 oz. Mix the acid with the water, and when cold dissolve the bichromate in it.

228/73. *A Subscriber*.—You will find all you require for a lecture on voltaic electricity in Ganot's and Deschanel's works, both of which are booksellers' stock-books.

231/16. *A Philadelphia Correspondent*, who knows little about English chemists' assistants' life, addresses the following query to us:—"What on earth does it signify in English advertisements for assistants to state the exact height? To fit the bedstead; or what?" It would be interesting to know whether custom is the dictative element in this matter or whether tall young men are still preferred.

233/50. *Tartar* sends us a label which reads:—"Digestive syrup, for indigestion, flatulency, biliousness, loss of appetite, constipation, &c. Dose: Half a teaspoonful in water, immediately after meals, and repeat in half an hour if not relieved. Shake the bottle." He has labels, bottles, &c.; everything but the syrup. We suggest the following as a basis for experiment:—

Cocaine hydrochlorate	1 grain
Tincture of nux vomica	30 minims
" " cardamoms	$1\frac{1}{2}$ drachm
Acid glycerine of pepsin to	2 oz.

Mix.

233/54. *X. Y. Z.* asks if there is any objection to making *tr. camph. eo.* as follows, and if so, what objection?—

Tincture of opium	1 fl. oz. m100
Benzoic acid	40 grs.
Camphor	30 "
Oil of anise	30 minims
Proof spirit	19 fl. oz.

The chief objection to making paregoric elixir in this way is that it is not the official process. Nevertheless, it is frequently made so.

237/21. *Silica*.—Apply to any wholesale house.

239/9. *Non-Prescriber*.—The last *DIARY* contains an excellent article on the selection of remedies for certain symptoms, but we think it would be going beyond our province if we were to admit into this section discussions on the most suitable medicines for particular cases.

"*Not Obsolete*."—In Mr. H. Machon's letter published last week the statement about Wright's ointment was misprinted. It should have read that Dr. Wright "disposed of the recipe to Zaccheus Hunter, grandfather of the present and sole proprietor." "Dutch drops" was a part of the next sentence.

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Sulphate of Soda	...	...	...	...	trace
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Moisture	...	...	...	...	.82
Insoluble	...	...	...	...	nil

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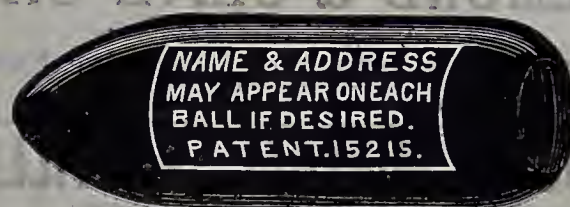
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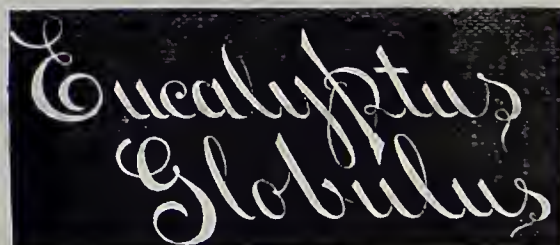
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This concentrated preparation, carefully drawn in our own laboratory, is highly recommended, and daily finding increased favour with the trade for making Sp. Nitre, as required for use, thus avoiding the risk of loss of Nitrous Æther, and the development of free acid, both of which are almost certain to occur in Spts. Nitre which has been some time drawn.

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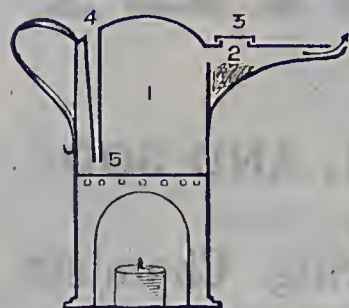
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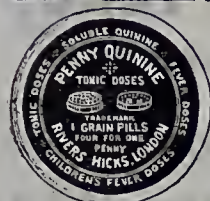
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Sell Well.
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	(Varnished)			
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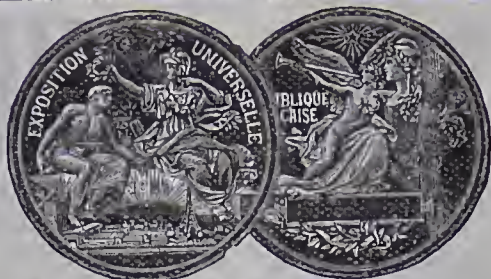
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Combines in one clear Fluid every valuable
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For use where Fats and Oils are contra-indicated.

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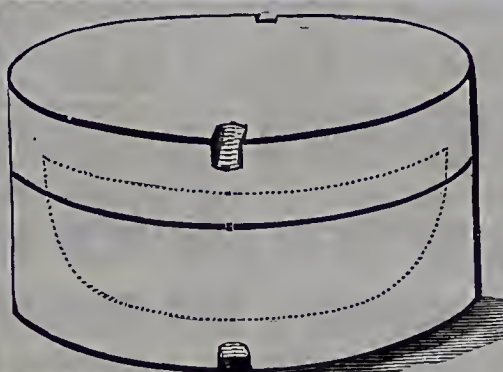
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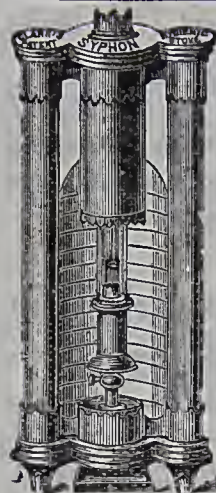
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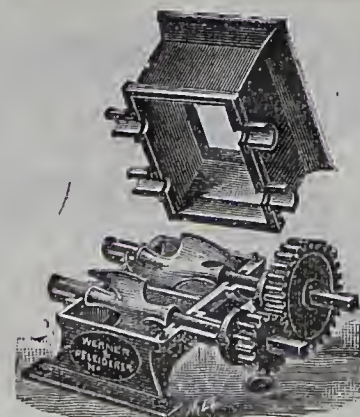
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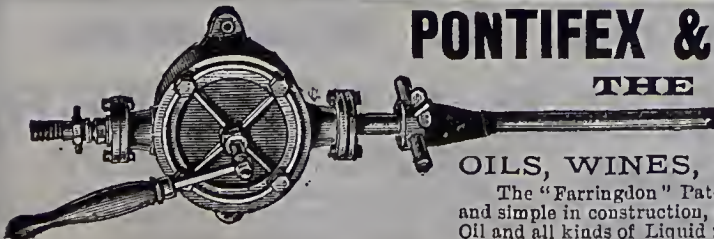
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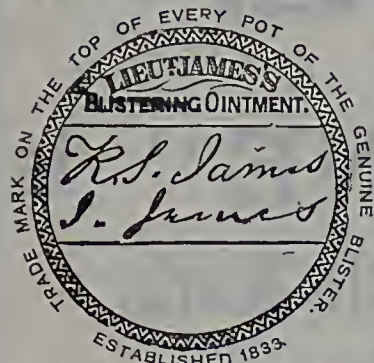
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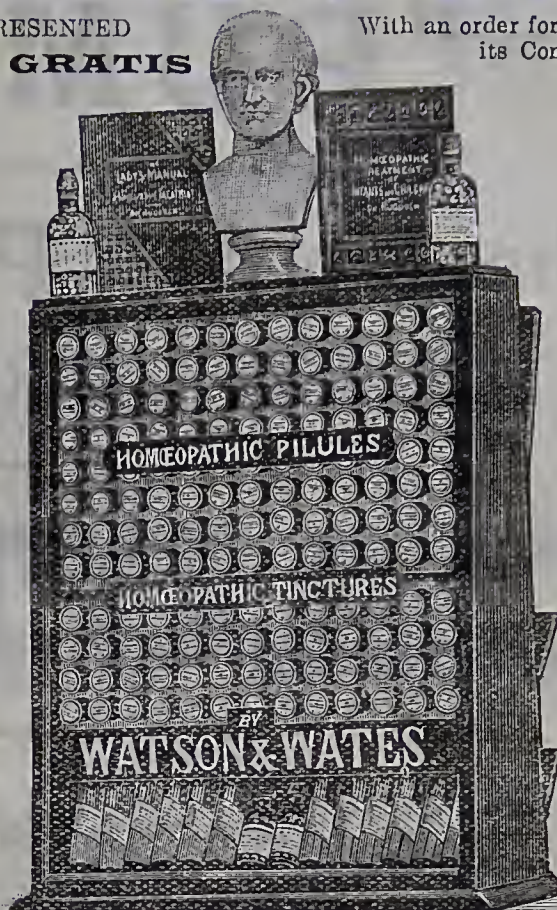
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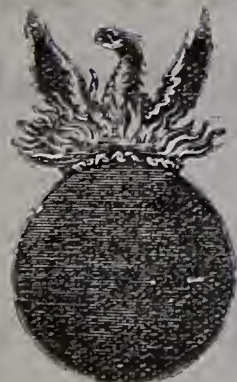
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